

Geography B

General Certificate of Secondary Education

Unit **B563/02**: Key Geographical Themes (Higher Tier)

Mark Scheme for June 2011

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| Question | | Expected Answers | Marks | Rationale |
|------------|--|---|-------|---|
| 1 | Use Fig. 1 in the Resource Booklet and the OS map extract. | | | |
| (a) | Study Fig. 1 , a photograph of the River Esk at Whitby, and the OS map extract. | | | |
| (i) ✓ | State the number of the A road which crosses the River Esk in Fig. 1 . | (A)171 | [1] | |
| (ii) ✓ | Give the 6 figure grid reference for this crossing point. | 899102 Also accept: 898102 899103 898103 899101 898101 | [1] | |
| (iii) ✓ | Use the scale to calculate the length of the River Esk in the area shown on Fig. 1 . Circle the correct answer. | 3.25 km | [1] | Accept a tick on the correct answer. |
| (b) ✓ | Describe the River Esk and its valley shown in Fig. 1 . | River: Meandering/bends/winding Confluence/Tributary; Wide/approx 100m; Gentle gradient; Mouth/estuary/tidal; Braiding/island/point bar. Valley: Widens out nearer sea; River cliff on outside of meander; Slip-off slope/river beach/deposited material on inside of meander; Gently sloping sides; Lower course/stage; Floodplain; Housing/industry/urban/tourism/transport/port; Agriculture/woodland/rural | [4] | 4 x 1 Ideas may be linked together but credit as separate points Points need to be linked to the photograph Not 'flat' |

| Question | | Expected Answers | Marks | Rationale |
|----------|---|--|-------|---|
| (c) ✓ | Suggest two ways in which the upper course of the River Esk will be different from that shown on the OS map extract. | Steeper/steep Narrower/narrow Straighter/few/small meanders; Shallow/shallower Steeper/steep valley sides; Interlocking spurs; Waterfalls/rapids/irregular profile/gorge; Smaller/small river/valley; Fast-flowing; Vertical erosion; Bedload is larger/rocks in river | [2] | 2 x 1 Accept river or valley differences Not just 'no meanders' Not just 'rocks' Not 'source' This is not an exhaustive list |
| (d) ✓ | There is a river meander at 838064. Explain how this river landform has been formed. You may draw a labelled diagram(s) as part of your answer. | Obstacle in the path of the river/hard rock; Water forced to move around the obstacle; Pools and riffles forces water to the banks; Takes the line of least resistance/quickest route; Erosion on outer bank; Faster/more powerful current/more energy to erode Deposition on inner bank; Slower/less powerful current/less energy to erode Credit abrasion/hydraulic action to 1 mark max. if linked to explanation | [4] | 4 x 1 Credit text or diagram labels Candidates may approach this answer in a number of ways eg, the formation of the meander or the processes involved in a meander |
| (e) ✓ | A main geomorphic process of a river is transport. Name and describe two ways that a river transports its load. | Solution/solute load: dissolved/soluble material carried in water; Suspension/suspended load: light material carried by water; Saltation: small/medium-sized material/pebbles bounced along bed; Traction: heavy material/rocks rolled along bed; Flotation: lighter load/organic material carried along the surface | [4] | 2 x 2 1 mark for name. 1 mark for description Allow the accurate description without term. If wrong definition to term, just allow mark for a correct term. |

| Question | | Expected Answers | Marks | Rationale |
|-----------|--|--|------------|---|
| (f) | CASE STUDY – River flooding | Case study will be marked using 3 levels | [8] | |
| L1 | Name a river where flooding is managed. | 0 marks Response does not address the question | | Accept name of town where flooding has occurred as an alternative to name of river, e.g Boscastle, Shrewsbury, Carlisle |
| L2 | Describe how the flooding is managed and explain how sustainable these methods are. Include at least three developed ideas. | Level 1 (1-3 marks) Demonstrates limited knowledge and understanding of the issue One or more relevant ideas which include limited detail. Ideas describe how flooding is managed and/or explain how sustainable these methods are <i>with little or no development</i> . Management methods are described and/or sustainability is explained <i>in basic terms</i> . eg Build flood barriers Plant trees in drainage basin Building embankments Too expensive to build flood defences everywhere | | Level 1 1 limited detail idea or simple statement = 1 mark 2 limited detail ideas or simple statements = 2 marks 2 limited detail ideas or simple statements + named example = 3 marks OR 3 limited detail ideas or simple statements = 3 marks |
| L3 | | | | |
| EG PLC | | Full level 1 needs three limited detail ideas or two limited detail ideas plus a named example Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinders communication. | | |
| | | Level 2 (4-6 marks) Demonstrates sound knowledge and understanding of the issue One to three relevant developed ideas. Ideas describe how flooding is managed and/or explain how sustainable these methods are, <i>with development</i> . Management methods are described and/or sustainability is explained <i>clearly</i> . eg Widen and deepen river channel so it can carry higher water flows | | Level 2 1 developed idea or statement = 4 marks 2 developed ideas or statements = 5 marks 3 developed ideas or statements = 6 marks |

| | Question | Expected Answers | Marks | Rationale |
|--|----------|---|-------|---|
| | | <p>Afforestation of upland slopes to intercept more rainfall Building flood defences only responds to a flood, plans are needed to reduce flooding in future</p> <p>Full level 2 needs three developed ideas plus a named example. If no example limit to 5 marks.</p> <p>Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.</p> <p>Level 3 (7-8) marks Demonstrates good knowledge and understanding of the issue At least three relevant developed ideas. Ideas both describe how flooding is managed and explain how sustainable these methods are, <i>with development</i>. Management methods are described and sustainability is explained <i>clearly</i>.</p> <p>Full level 3 needs three developed ideas plus relevant place-specific detail of the example, (such as place name, costs of management). If no relevant place-specific detail limit to 7 marks</p> <p>Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.</p> <p>Content guide River may be any location or scale</p> <p>Flood management methods could include:</p> <ul style="list-style-type: none"> • monitoring of precipitation/discharge for flood warning system | | <p>Limit to 5 marks if no named example</p> <p>Level 3 3 developed ideas or statements which make a comprehensive answer (ie describe and explain) = 7 marks</p> <p>A comprehensive answer + place-specific detail = 8 marks</p> <p>Place specific detail – look for something which is unique/clearly identifiable with the case study.</p> |

| | Question | Expected Answers | Marks | Rationale |
|--|----------|--|-------|-----------|
| | | <ul style="list-style-type: none"> • construction of flood barriers/embankments • flood control dams • storage basins • flood channels • increased drainage • restricting development on floodplains • afforestation in catchment areas • increased green space in urban areas education/awareness of public <p>Sustainability could be economic, environmental, social. References could include:</p> <ul style="list-style-type: none"> • costs re: economic sustainability, especially for LEDCs • if method(s) tackles the causes of flooding or the effects • if method(s) will be successful in the future/forever • effect of method(s) on the environment/natural systems • involvement of local people in the method(s) | | |

| Question | | Expected Answers | Marks | Rationale |
|------------|--|--|-------|---|
| (2) | Use the OS map extract and Fig. 2 in the Resource Booklet. | | | |
| (a) | Study the OS map extract. | | | |
| (i) ✓ | Use the map key to identify the type of beach deposit in grid square 8612. | Shingle | [1] | |
| (ii) ✓ | What is the highest point in grid square 9209? | 93 - 109(m) Accept Beacon Hill | [1] | Can be any range or single figure between these two digits. Not 100m+ or more than 100m |
| (iii) ✓ | Use map evidence to compare the slope of the land in grid squares 9209 and 9210. | Steeper slope in 9210 or gentler slope in 9209 | [1] | Must be a comparison |
| (b) | Study Fig. 2 which shows Saltwick Bay, in grid square 9110. | | | |
| (i) ✓ | Give two pieces of evidence from Fig. 2 which show that erosion has taken place there. | Stack/stump; Cliff; Headland/bay; Wave-cut platform/coastline receded; Rocks/beach | [2] | 2 x 1 |
| (ii) ✓ | Name and describe two processes of erosion which affect this area of coastline. | Hydraulic action Waves force air into cracks/force of water; Abrasion/corrasion Waves throw material against cliff/grinding or rubbing by sediment; Attrition Sand particles/pebbles collide with each other/cliff and wear away/are broken down; Corrosion/solution Dissolved/soluble material worn away | [4] | 2 x 2 1 mark for each name 1 mark for each description If the name and wrong description accept just the correct term. If description but not correct term allow 1 mark |

| Question | | Expected Answers | Marks | Rationale |
|-----------------|--|---|-------|---|
| (c) ✓ DEV | Explain two ways that geology affects the formation of coastal landforms. | <p>Layers of hard/resistant rock Forms a headland/cliff (dev); Layers of soft rock Forms a bay (dev);</p> <p>Sea erodes weakness in resistant rock (chalk/limestone/granite) Forms landforms such as cave, arch, stack (dev);</p> <p>Less resistant rock (clay/sand) weakened by undercutting Landslide/slumping due to instability/gentle slopes (dev);</p> <p>Concordant /Rocks lie parallel to the coast Coves/leads to islands offshore (dev); Discordant coastline/Rocks lie at right angles to the wave attack Headlands and bays (dev)</p> | [4] | <p>2 x 2</p> <p>1 mark for basic explanation second mark for development</p> |
| (d) ✓ | There is a beach at Whitby Sands in and around grid square 8811 on the OS map extract. Suggest how the beach has been formed. You may draw a labelled diagram(s) as part of your answer. | <p>Source of beach material comes from cliff/offshore</p> <p>Constructive waves; Swash more powerful than backwash; Gentle gradient allows deposition; Build up/deposition of beach material ; Backwash has insufficient power to remove material.</p> <p>Longshore drift; Prevailing winds; Dictate the angle of wave approach; Swash pushes material up the beach in the direction of wave break; Backwash is determined by gravity; Piles up behind groyne or other obstruction/West Pier</p> | [4] | <p>4 x 1</p> <p>Ideas may be linked together but credit as separate points Credit text or diagram labels</p> <p>Candidates may approach this answer in a number of ways eg, the formation of the beach or the processes involved in longshore drift</p> |

| Question | | Expected Answers | Marks | Rationale |
|----------|---|---|------------|---|
| (e) | CASE STUDY – Coastline management | Case study will be marked using 3 levels | [8] | Accept name of coastline area, eg. Holderness or place on coastline, e.g. Mappleton |
| L1 | Name an area of coastline where management has taken place. | 0 marks Response does not address the question | | |
| L2 | | | | |
| L3 | Describe how the coastline has been managed and explain how sustainable these methods are. Include at least three developed ideas. | Level 1 (1-3 marks) Demonstrates limited knowledge and understanding of the issue One or more relevant ideas which include limited detail. Ideas describe how coastline is managed and/or explain how sustainable these methods are <i>with little or no development</i> . Management methods are described and/or sustainability is explained in <i>basic terms</i> . eg Build sea wall/rip rap Build up beach by dumping more sand on it Allow some areas to flood naturally Too expensive to build barriers everywhere Full level 1 needs three limited detail ideas or two limited detail ideas plus a named example Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinders communication. | | Level 1 1 limited detail idea or simple statement = 1 mark 2 limited detail ideas or simple statements = 2 marks 2 limited detail ideas or simple statements + named example = 3 marks OR 3 limited detail ideas or simple statements = 3 marks |
| EG | | | | |
| PLC | | | | |
| | | Level 2 (4-6 marks) Demonstrates sound knowledge and understanding of the issue One to three relevant developed ideas. Ideas describe how coastline is managed and/or explain how sustainable these methods are, <i>with development</i> . Management methods are described and/or sustainability is explained <i>clearly</i> . eg Put gabions, wire cages filled with rock, in front of the cliff to absorb the power of breaking waves. Take beach material back along the beach to | | Level 2 1 developed idea or statement = 4 marks 2 developed ideas or statements = 5 marks 3 developed ideas or statements = 6 marks Limit to 5 marks if no named |

| | Question | Expected Answers | Marks | Rationale |
|--|----------|--|-------|--|
| | | <p>counteract longshore drift and keep an even beach profile Building groynes to restrict movement of sand along the coast protects one area but leaves other areas with no protection and so erosion increases.</p> <p>Full level 2 needs three developed ideas plus a named example. If no example limit to 5 marks.</p> <p>Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.</p> <p>Level 3 (7-8) marks Demonstrates good knowledge and understanding of the issue At least three relevant developed ideas. Ideas both describe how coastline is managed and explain how sustainable these methods are, <i>with development</i>. Management methods are described and sustainability is explained <i>clearly</i>.</p> <p>Full level 3 needs three developed ideas plus relevant place-specific detail of the example, (such as place name, costs of management). If no relevant place-specific detail limit to 7 marks</p> <p>Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.</p> <p>Content guide Coastline can be any location or scale.</p> | | <p>example</p> <p>Level 3 3 developed ideas or statements which make a comprehensive answer (ie describe and explain) = 7 marks</p> <p>A comprehensive answer + place-specific detail = 8 marks</p> <p>Place specific detail – look for something which is unique/clearly identifiable with the case study.</p> |

| | Question | Expected Answers | Marks | Rationale |
|--|----------|---|-------|-----------|
| | | <p>Methods could include hard or soft engineering or managed retreat such as:</p> <ul style="list-style-type: none"> • Sea walls • rock armour/barriers • groynes • beach replenishment • drainage pipes in cliff • allow sea to flood land to achieve its natural position <p>Sustainability references could include:</p> <ul style="list-style-type: none"> • Costs re: economic sustainability, especially for LEDCs • If method(s) will be successful in the future/forever • Effect of method(s) on the environment/natural systems • Involvement of local people in the method(s) • Impact of method(s) on other places along the coast | | |

| Question | | Expected Answers | Marks | Rationale |
|-------------------|--|--|------------|---|
| 3 | Use Figs 3a and 3b in the Resource Booklet. | | | |
| (a) | Study Figs 3a and 3b , population pyramids for Sweden and Lesotho. | | | |
| (i) ✓ | What percentage of the total population of Sweden is in the 15-19 age group? | 6.8 – 6.9 (%) | [1] | Do not need unit. |
| (ii) ✓ | Compare the percentage of total population over 80 years old in Sweden and Lesotho. Use data in your answer. | Higher percentage of over 80 years old in Sweden. 5.2 – 5.4% compared with 0.9 -1.1% Need both % figures Or the difference between the two % figures ranging from 4.1–4.5 Or Sweden is 5-6 times the amount of Lesotho Credit Total population is higher More people over 80 Larger elderly population | [2] | 2 x 1 1 mark reserve for the comparative term (higher, lower, more) Total figures not male/female Not 'about 1% or 5%' No credit for reference to life expectancy. |
| (iii) ✓ | Identify two ways in which the population structure of Sweden is typical of an MEDC. | Straight sided shape/approximately equal; proportion in all age groups/Not pyramid shape/convex; Narrow base/small proportion/low number in younger age groups/under 15/children; Female proportions are greater/more females in 80+ age group; Wider apex/large proportion/large number in older age groups/over 64/High number of old people; Economically active/working population is largest proportion/biggest group | [2] | 2 x 1 No credit for reference to birth rate/death rate/life expectancy No credit for increase/decrease proportions |

| | Question | Expected Answers | Marks | Rationale |
|-----------|---|--|------------|--|
| (iv) ✓ | <p>Suggest how the percentage of the population under 15 years old in Lesotho is likely to change in the future.</p> <p>Give reasons for your answer.</p> | <p>Percentage under 15 years old is likely to decrease</p> <p>Possible reasons will include: More family planning clinics/more advice and education on family planning; Contraception is more widely available; Raised status of women/changing attitudes to careers/rearing children/later marrying age; Lower infant mortality so less pressure on parents to have many children; Introduction of government policy on birth control; Fewer children needed to work/earn income so less pressure on parents to have many children; Lifestyle choice to have fewer children; Ageing population results in larger proportion in older age groups/increased life expectancy; Improved medical treatment/better hygiene standards/healthier diet/less poverty; Higher child mortality due to epidemic of disease/famine/malnutrition;</p> | [4] | <p>1 mark reserve</p> <p>3 x 1</p> <p>Ideas may be linked together but credit as separate points</p> <p>'It will become more developed' is not enough for a reason</p> |
| (b) ✓ | <p>Why does life expectancy vary between countries at different levels of economic development?</p> | <p>Ideas such as: MEDCs have Better health care provision/access to medicines, doctors, hospitals/treatment of diseases such as malaria/cancer; - to 2 marks max More social care facilities/care homes; Better standard of living/quality of life; Access to clean water/water supply; Improved diet/enough food/no malnutrition; Better sanitation/hygiene; Fewer disease epidemics such as cholera; Good quality/stronger housing; More able to cope with natural hazards: Better infrastructure/evacuation plans; Working conditions are less hazardous;</p> | [4] | <p>4 x 1</p> <p>Ideas may be linked together but credit as separate points</p> <p>Answer may be from perspective of LEDC or not specific – e.g. 'level of healthcare varies between countries'</p> |

| | Question | Expected Answers | Marks | Rationale |
|-----------------|---|--|------------|--|
| | | High levels of education gives the chance of a higher paid job; Better education about health issues; | | |
| (c) ✓ DEV | Suggest two consequences of an ageing population in a country. Develop your ideas. | Consequences such as: Increasing number of elderly dependents/higher dependency ratio Economic burden on children/state (dev) /children leave work to look after them (dev); Demand for/cost of medical/residential care Higher taxes (dev); Later retirement age/people work longer To reduce pension burden (dev) / less jobs for young people (dev); Fewer in working age groups Higher taxes (dev)/increased migration (dev); More demand for specialist employment Eg care home workers (dev); Reduction in birth rate School closures (dev); More government spending on old Less to spend on young/other services (dev); Elderly parents need care Financial burden on children (dev); Change in service provision/facilities Bingo halls not nightclubs (dev); More financial demand on government/council To pay for pensions/services for elderly (dev); Increased power of older population Grey vote/spending power (dev); | [4] | 2 x 2 1 mark for basic consequence, second mark for development Each consequence can only be developed once. The dev mark could be stated first before consequence Credit other valid ideas. |

| Question | | Expected Answers | Marks | Rationale |
|----------|--|--|-------|---|
| (d) | CASE STUDY – Population management strategies | Case study will be marked using 3 levels | [8] | |
| L1 | Name a country in which management strategies have been used to influence natural population change. | 0 marks Response does not address the question | | Level 1 1 limited detail idea or simple statement = 1 mark |
| L2 | | Level 1 (1-3 marks) Demonstrates limited knowledge and understanding of the issue | | 2 limited detail ideas or simple statements = 2 marks |
| L3 | | One or more relevant ideas which include limited detail. Ideas describe strategies to influence natural population change and/or explain how successful they have been <i>with little or no development</i> . Strategies are described and/or success is explained in <i>basic terms</i> . eg Family planning clinics set up in rural areas Laws introduced to raise the minimum age of marriage Fines for parents having more than one child Many families in rural areas ignored the policy | | 2 limited detail ideas or simple statements + named example = 3 marks OR 3 limited detail ideas or simple statements = 3 marks |
| EG | Describe the strategies which have been used by the government to influence the rate of natural population change. How successful have these strategies been? Include at least three developed ideas. | Full level 1 needs three limited detail ideas or two limited detail ideas plus a named example | | |
| PLC | | Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinders communication. | | |
| | | Level 2 (4-6 marks) Demonstrates sound knowledge and understanding of the issue One to three relevant developed ideas. Ideas describe strategies to influence natural population change and/or explain how successful they have been, <i>with development</i> . Strategies are described and/or success is explained <i>clearly</i> . | | Level 2 1 developed idea or statement = 4 marks 2 developed ideas or statements = 5 marks 3 developed ideas or statements = 6 marks |

| | Question | Expected Answers | Marks | Rationale |
|--|----------|--|-------|--|
| | | <p>eg Fieldworkers go into remote rural areas teaching about contraception and explaining the benefits of smaller families</p> <p>Family planning helps people to improve their standard of living and provides opportunities for better health care and education for the family</p> <p>Later marriage reduces the number of children a woman may have, which may improve the health of the mother and survival chances of the children.</p> <p>Infanticide grew as parents wanted a male heir, this caused an imbalance in the gender structure</p> <p>Full level 2 needs three developed ideas plus a named example. If no example limit to 5 marks.</p> <p>Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.</p> <p>Level 3 (7-8) marks</p> <p>Demonstrates good knowledge and understanding of the issue</p> <p>At least three relevant developed ideas. Ideas both describe strategies to influence natural population change and explain how successful they have been, <i>with development</i>.</p> <p>Strategies are described and success is explained <i>clearly</i>.</p> <p>Full level 3 needs three developed ideas plus relevant place-specific detail of the example, (such as place name, specific policy). If no relevant place-specific detail limit to 7 marks</p> <p>Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.</p> | | <p>Limit to 5 marks if no named example</p> <p>Level 3</p> <p>3 developed ideas or statements which make a comprehensive answer (ie describe and explain) = 7 marks</p> <p>A comprehensive answer + place-specific detail = 8 marks</p> <p>Place specific detail – look for something which is unique/clearly identifiable with the case study.</p> |

| | Question | Expected Answers | Marks | Rationale |
|--|----------|---|-------|-----------|
| | | <p>Content guide Country may be LEDC or MEDC where management is limiting or promoting population growth</p> <p>Strategies should focus on influencing the country's birth rate and people's attitudes to having children.</p> <ul style="list-style-type: none"> • Family planning/access to contraception • Tax incentives • Health care/education incentives • China's one child law • Incentives to have more children eg Singapore • Laws to prevent abortions eg Ireland, Philippines <p>Success of these strategies could include:</p> <ul style="list-style-type: none"> • Improved health/quality of life for women • Improved health for babies/children • Shortage of child workers in rural areas • Increased termination of female babies • 4-2-1 problem in China – looking after older relatives • 'Little emperors' 'spare branches' in China with male/female imbalance | | |

| Question | | Expected Answers | Marks | Rationale |
|------------------|---|---|------------|---|
| 4 | Use Figs 4 and 5 in the Resource Booklet. | | | |
| (a) | Study Fig. 4 , which shows population change in the world's largest cities. | | | |
| (i) ✓ | Identify the city which had the largest increase in population numbers between 1990 and 2015 (projected). | Lagos | [1] | |
| (ii) ✓ | Compare the growth in population of Tokyo and Lagos. | Rate of growth: More even growth of population in Lagos/slower rate of growth in Tokyo; Amount of growth: Greater growth/ three times as much growth in Lagos overall; Tokyo: 32 to 36 million or 4 million Lagos: 5 to 17 million or 12 million | [2] | 2 x 1 Figures must be comparative and include both cities Not enough to say eg Tokyo is slowing on its own |
| (b) ✓ | Migration is one reason for the increase in urban populations in LEDCs. Give two attractions of cities for people who live in rural areas of LEDCs. | Regular/higher paid work/lots of jobs; Health Services – e.g. health care/clinics/doctors; Education- e.g., access to schools/universities; Amenities – electricity/water supply; Food – regular/more variety; 'Bright lights' /promise of better life/better quality of life/shops/entertainment; Housing – better standard/built; | [2] | 2 x1 Not cheaper land Not just jobs on its own Not PUSH factors |
| (c) ✓ | A consequence of rural to urban migration into LEDC cities is the growth of squatter settlements. Describe two common locations of squatter settlements and explain why they are located in such areas. | Description: Edge of city; Near to main roads/railways/under bridges/flyovers; Near to factories; Near the CBD; Flood plain/near river; Hillsides; Waste dumps; Vacant/derelict land; | [4] | 2 x 2 1 mark for description, second mark for appropriate explanation If MEDC cities written about mark to 2 marks max. |

| | Question | Expected Answers | Marks | Rationale |
|-----|--|--|-------|---|
| | | <p>Explanation: Land is unsuitable for permanent development; More space/availability of land; Easy access to work; Easy access to city centre; Sheltered; Water supply; Nobody else wants to live there to 2 marks max eg., noisy, danger of flooding, toxic, landslide, disease</p> | | <p>Not 'land is cheap' No double credit for explanation e.g. 'on hillside because nobody else wants to live there and on a flood plain because nobody wants to live there'. This answer would gain 3 marks. Can credit explanation without description</p> |
| (d) | <p>Explain why squatter settlements are a problem for city councils.</p> | <p>Ideas such as: Squatter settlements are growing/population increasing/ more people arrive looking for somewhere to stay; High cost of funding/cannot afford improvements to squatter settlements; Squatter settlements are illegal/no ownership rights; Difficult to knock down the settlement; Difficult to evict/re-locate the residents; Improvements attract more migrants to a settlement; Negative impact of squatter settlements on world view of city/reputation; High crime rates; Unplanned so difficult to provide infrastructure; Cramped/crowded so spread of disease or fire cannot be contained or dealt with; No waste disposal so contaminates river; Residents don't pay taxes; Illegal tapping into electricity supply; Council has to deal with problems/squatter settlement is difficult to manage/needs to plan developments Dissatisfaction from existing residents demanding action against squatter settlement</p> | [4] | <p>4 x 1 Ideas may be linked together but credit as separate points Problem for council not residents (no drains, electricity etc) Not just 'costs money'. Credit other valid ideas.</p> |

| Question | | Expected Answers | Marks | Rationale |
|-----------------|---|--|-------|---|
| (e) ✓ DEV | In MEDCs, many people migrate from large cities to live in rural areas. This is called counter-urbanisation. Describe two consequences for rural areas of counter-urbanisation. Develop your ideas. | Consequences could be positive or negative. Possible consequences will include: Population increases rapidly Area becomes a dormitory settlement (dev); Character of village changes E.g. new expensive housing developments (dev); Increased demand for existing properties Prices rise (dev); Change in population make up E.g. young & old, original residents & newcomers Newcomers have spending power Local shops & businesses benefit (dev); Families with children who attend local school Prevent its closure (dev); Commuters do not use local shops So local shops close (dev); No social mix/distrust between original residents and incomers Separate communities (dev); Increase in house prices So locals cannot afford to buy (dev); Commuting to work causes transport congestion causing air/noise pollution(dev); Loss of farmland So loss of production (dev) Farmer sells land to developer Makes a large profit (dev) Habitats destroyed Loss of bio-diversity | [4] | 2 x 2 1 mark for basic consequence, second mark for development Credit other valid ideas. |

| Question | | Expected Answers | Marks | Rationale |
|----------|--|---|------------|---|
| (f) | CASE STUDY – changes in retail service provision | Case study will be marked using 3 levels | [8] | |
| L1 | Name and locate an example of changes in retail service provision in an area. | 0 marks Response does not address the question | | |
| L2 | Describe the recent changes which have taken place and explain why these changes have occurred. Include at least three developed ideas. | Level 1 (1-3 marks) Demonstrates limited knowledge and understanding of the issue One or more relevant ideas which include limited detail. Ideas describe recent changes and/or explain why these changes have occurred <i>with little or no development</i> . Changes are described and/or explained in <i>basic terms</i> . eg Village stores have closed down New indoor shopping malls have been built in town centres Growth of regional shopping centres More space on the edge of a city Town centre needs to compete with out-of-town developments Full level 1 needs three limited detail ideas or two limited detail ideas plus a named example Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinders communication. | | Level 1 1 limited detail idea or simple statement = 1 mark 2 limited detail ideas or simple statements = 2 marks 2 limited detail ideas or simple statements + named example = 3 marks OR 3 limited detail ideas or simple statements = 3 marks |
| L3 | | | | |
| EG | | | | |
| PLC | | | | Level 2 1 developed idea or statement = 4 marks 2 developed ideas or statements = 5 marks |

| | Question | Expected Answers | Marks | Rationale |
|--|----------|---|-------|---|
| | | <p>eg Neighbourhood shopping areas have declined and many shops are now vacant or occupied on a short-term lease</p> <p>Traditional high street companies have closed down and been replaced by 'cheap' stores aimed at high volume and low price sales</p> <p>Need to attract customers by a pleasant indoor shopping environment which also contains food outlets and entertainment facilities.</p> <p>Full level 2 needs three developed ideas plus a named example. If no example limit to 5 marks.</p> <p>Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.</p> <p>Level 3 (7-8) marks</p> <p>Demonstrates good knowledge and understanding of the issue</p> <p>At least three relevant developed ideas. Ideas both describe recent changes and explain why these changes have occurred, <i>with development</i>.</p> <p>Changes are described and explained <i>clearly</i>.</p> <p>Full level 3 needs three developed ideas plus relevant place-specific detail of the example, (such as place name, specific retail outlets). If no relevant place-specific detail limit to 7 marks</p> <p>Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.</p> | | <p>3 developed ideas or statements = 6 marks</p> <p>Limit to 5 marks if no named example</p> <p>Level 3</p> <p>3 developed ideas or statements which make a comprehensive answer (ie describe and explain) = 7 marks</p> <p>A comprehensive answer + place-specific detail = 8 marks</p> <p>Place specific detail – look for something which is unique/clearly identifiable with the case study.</p> |

| | Question | Expected Answers | Marks | Rationale |
|--|----------|---|-------|-----------|
| | | <p>Content guide Retail provision may be any scale at any location</p> <p>Change could include decline of provision and/or development of new provision</p> <ul style="list-style-type: none"> • decline of 'local' high street shops • decline of rural post offices • new city centre shopping centres • new superstores • new out-of town/regional shopping centres • growth of charity shops • revamp of suburban shopping areas <p>Explanation must focus on change(s) described</p> <ul style="list-style-type: none"> • loss of footfall/customers due to competition from large superstores • changes in shopping habits eg ethical shopping • city centre regeneration schemes • 'shop locally' type campaigns • reliance on accessibility by car | | |

| Question | | Expected Answers | Marks | Rationale |
|-------------------------------|---|---|------------|--|
| 5 | Use Figs 6, 7a and 7b in the Resource Booklet. | | | |
| (a) | Study Fig. 6 , a world map showing risk of death by drought. | | | |
| (i) ✓ | Explain what is meant by the term 'drought'. | Lack of rain/less rain than normal/lack of water Over long period of time Not enough rain to support people/grow crops/drink | [2] | 2 x 1 |
| (ii) ✓ | Describe the distribution of the different levels (high, medium and low) of risk of death by drought in Africa. | High risk areas: within the tropics; band across continent north and south of equator; east coast; within tropics; around the equator; West Africa; Medium risk areas: in southern Africa; around Tropic of Capricorn Low risk areas: most south of the equator; within the tropics; scattered; above and below equator | [3] | 2 marks max for each of the risk areas. 1 max for place names e.g., South Africa/ Sahel No credit for 'no risk of drought' distribution No credit for outside of Africa |
| (b) ✓ DEV | Describe two ways that drought can affect the lives of people who live in MEDCs. Develop your ideas. | Leads to introduction of water conservation measures/rationing/people allowed to use less water So unable to use water for luxury use eg swimming pool/water lawn/hosepipe ban (dev); Poor harvests so shortage of food supply Causes increase in food prices (dev); Farmers lose money if poor harvest So may become bankrupt (dev); Golf course cannot water greens So has to close (dev); Bush fire/wild fires may break out Which threaten settlements/people have to evacuate (dev); Realise importance of conserving supplies Leads to introduction of water meters/people think more about water usage (dev); | [4] | 2 x 2 1 mark for basic effect, second mark for development Note focus on MEDCs No credit for LEDC specific points. |

| Question | | Expected Answers | Marks | Rationale |
|----------|--|--|------------|--|
| (c) ✓ | Why is the impact of drought usually greater in LEDCs than MEDCs? | <p>Less secure/reliable supplies of water in drought risk areas/rely on rainwater to drink; Not as equipped to deal with drought/lack of reservoirs/distribution pipelines/cannot afford water storage/distribution; Crops/animals die; Impact on livelihood of farmer; Starvation/no food supply; Cannot afford to import food if harvests fail; Individuals cannot afford bottled water; Greater risk of hunger/famine; Fresh water sources dry up; Risk of disease from contaminated water/lack of water; People cannot buy bottled water; Healthcare system cannot cope with drought;</p> | [4] | <p>4 x 1</p> <p>Ideas may be linked together but credit as separate points</p> |

| | Question | Expected Answers | Marks | Rationale |
|----------|--|---|------------|--|
| (d) ✓ | Look at Figs 7a and 7b , photographs which show two ways in which people in LEDCs try to overcome the problem of drought. Explain how sustainable each method will be. | Schemes are small scale/low cost So they are affordable for local people; Low level technology can be built/maintained by local people Don't rely on foreign support; Can store water for future use Allows long-term planning; Pumping lowers groundwater supplies This may lead to crop failure; Pump access to groundwater Which is unpolluted/clean; Pump may break down Cannot be fixed because of lack of parts; Pump is for village/community Don't have to travel to get water; Storage tank depends on rain to fill up May not rain; Possible evaporation losses from tank In hot conditions; Once built it will require little maintenance Because it's low technology/appropriate for area; Storage tank is cheap Each village/community can afford it; Storage tank keeps water clean/free from disease/unpolluted People can rely on it for drinking; | [4] | Credit each photograph separately. 1 mark reserve for each method. Can be separate ideas, don't need to be developed |

| Question | | Expected Answers | Marks | Rationale |
|----------|--|--|------------|---|
| (e) | CASE STUDY – climatic hazard in an LEDC | Case study will be marked using 3 levels | [8] | |
| L1 | Name and locate an example of a climatic hazard in an LEDC. | 0 marks Response does not address the question | | |
| L2 | | | | |
| L3 | Explain the natural processes causing the hazard and describe its impact on people in the area. Include at least three developed ideas. | Level 1 (1-3 marks) Demonstrates limited knowledge and understanding of the issue One or more relevant ideas which include limited detail. Ideas explain processes causing the hazard and/or describe its impact on people <i>with little or no development</i> . Processes are explained and/or impacts are described <i>in basic terms</i> . eg Sea temperature must be over 26 degrees Violent winds damage crops/cause buildings to collapse Rains don't arrive year after year Crops fail to grow causing widespread famine Full level 1 needs three limited detail ideas or two limited detail ideas plus a named example Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinders communication. | | Level 1 1 limited detail idea or simple statement = 1 mark 2 limited detail ideas or simple statements = 2 marks 2 limited detail ideas or simple statements + named example = 3 marks OR 3 limited detail ideas or simple statements = 3 marks |
| EG | | | | |
| PLC | | | | |
| | | Level 2 (4-6 marks) Demonstrates sound knowledge and understanding of the issue One to three relevant developed ideas. Ideas explain processes causing the hazard and/or describe its impact on people, <i>with development</i> . Processes are explained and/or impacts are described <i>clearly</i> . eg Water evaporates from the warm ocean, as the | | Level 2 1 developed idea or statement = 4 marks 2 developed ideas or statements = 5 marks 3 developed ideas or statements = 6 marks |

| | Question | Expected Answers | Marks | Rationale |
|--|----------|--|-------|--|
| | | <p>vapour rises it cools and forms clouds Storm surge combined with a high tide increase water levels by 5m causing flooding in low-lying areas Moist rising air at the equator did not move north to reach the countries of the Sahel When rains fail farmers over-graze the land causing soil erosion and desertification.</p> <p>Full level 2 needs three developed ideas plus a named example. If no example or MEDC example limit to 5 marks.</p> <p>Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.</p> <p>Level 3 (7-8) marks Demonstrates good knowledge and understanding of the issue At least three relevant developed ideas. Ideas both explain processes causing the hazard and describe its impact on people, <i>with development</i>. Processes are explained and impacts are described <i>clearly</i>. Full level 3 needs three developed ideas plus relevant place-specific detail of the example, (such as place name, number of victims). If no relevant place-specific detail limit to 7 marks</p> <p>Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.</p> | | <p>Limit to 5 marks if no named example or MEDC example</p> <p>Level 3 3 developed ideas or statements which make a comprehensive answer (ie explain and describe) = 7 marks</p> <p>A comprehensive answer + place-specific detail = 8 marks</p> <p>Place specific detail – look for something which is unique/clearly identifiable with the case study.</p> |

| | Question | Expected Answers | Marks | Rationale |
|--|----------|---|-------|-----------|
| | | <p>Content guide</p> <p>Climatic hazard may be a drought or tropical storm which must be located in an LEDC.</p> <p>Natural processes causing severe drought will include</p> <ul style="list-style-type: none"> • less rainfall than normal • Other local/regional climatic factors eg prevention of northwards migration of Inter Tropical Convergence Zone into Sahel <p>Natural processes causing tropical storms will include</p> <ul style="list-style-type: none"> • high ocean temperatures causing rapid evaporation of large volumes of water, which sucks in warm air to generate storm energy and high winds <p>Impacts on people could include</p> <ul style="list-style-type: none"> • loss of life/injury, • loss of homes/destruction of other property/infrastructure • problems faced by people after the hazard eg homelessness, food shortages | | |

| Question | | Expected Answers | Marks | Rationale |
|------------------|--|---|------------|--|
| 6 | Use Figs 8 and 9 in the Resource Booklet. | | | |
| (a) | Study Fig. 8 which shows active volcanoes in Japan. | | | |
| (i) ✓ | Describe the distribution of these volcanoes. | <p>Most are on Honshu/largest island/mainland; Mainly located parallel to/near/on plate boundaries/within 250km of plate boundary; Mainly located on Eurasian plate; No volcanoes on Shikoku/no volcanoes on the Pacific Plate; Linear pattern/SW-NE/S-N; More on land than in sea/some in sea; Clustered; allow 2nd mark if there is detail about location A few on the Philippine plate; In centre/middle of the country</p> | [3] | 3 x 1 |
| (ii) ✓ | Suggest two examples of information observed and recorded by the volcano observation centres. Explain how each one could help to predict a volcanic eruption. | <p>Detection on seismograph/change in seismic activity - Rising magma causes earth to vibrate/tremors/possible trigger to an eruption;</p> <p>Deformation of ground surface/bulging – Upwelling of magma;</p> <p>Change in composition of gases/more sulphur escaping from volcano – Rise of magma;</p> <p>Increase in temperature of lava escaping at the surface – Suggests hotter magma rising from beneath crust;</p> | [4] | 2 x 2 1 mark for type of information, second mark for how it can predict eruption |

| | Question | Expected Answers | Marks | Rationale |
|------------|--|--|------------|--|
| | | Steam rising/temperature of ground/water increases/change in composition or density of water/height of water table – Sign of imminent eruption Past history of eruptions – Similar patterns leading up to an eruption | | |
| (iii) ✓ | Explain how the movement of plates can cause volcanic eruptions at a destructive plate margin. You may draw a labelled diagram(s) as part of your answer. | Convergence of plates Due to movement of convection currents Oceanic/denser plate Forced under/subduction Friction causes plate to melt Creates magma Pressure of magma builds beneath earth's surface Magma escapes through weakness in crust | [4] | 4 x 1 Credit text or diagram labels Credit  as label for plates converge Credit convection circles as label for currents Ideas may be linked together but credit as separate points No credit for constructive margins. No credit for earthquakes |
| (b) ✓ | Fig. 9 is part of a poster which gives advice for dealing with volcanic eruptions in Japan. Give two ways that such advice helps to protect people. | Advice raises awareness of people living near volcano People know what to do/where to go to/educates them Reduce panic when an eruption occurs Early warning of possible eruption Tip 1: Map dissuades people from living close to volcanoes Tip 2: Phone call so gives emergency services time to prepare Tip 3: Evacuate so safe from eruption Tip 4: Follow instructions so less panic | [2] | 2 x 1 No credit for copying from Fig. 9 – must develop idea |

| Question | | Expected Answers | Marks | Rationale |
|-----------------|--|--|-------|--|
| (c) ✓ DEV | In some LEDCs there is no official advice given about any future volcanic eruption. Suggest two reasons why many people in LEDCs continue to live near active volcanoes. Develop your ideas. | Jobs in tourism Such as guide/souvenir seller (dev); Mining /volcanologists work there High income/ don't want to lose their job (dev); Fertile volcanic soils Produce high yields/intensive farming/livelihood (dev); Family ties/always lived there/brought up in the region Don't want to move away (dev); Pressure on land/lack of space for settlement No choice about moving (dev); People are poor Cannot afford to move (dev); Volcano hasn't erupted for long time Perceive there is no danger (dev); Scenery is spectacular Worth the risk of staying (dev); Geothermal power Cheap energy source (dev); Confident in prediction/early warning/ignorant of volcano Don't think there is danger (dev); Symbolic or religious icon Because they think it will keep them safe (dev); | [4] | 2 x 2 1 mark for basic reason, second mark for development No credit for cheap land Must say what jobs; or something about the crop yields not just good for farming. Do not credit same development twice |

| Question | | Expected Answers | Marks | Rationale |
|----------|--|---|------------|---|
| (d) | CASE STUDY – tectonic hazard in an LEDC | Case study will be marked using 3 levels | [8] | |
| L1 | Name and locate an example of a tectonic hazard event in an LEDC. | 0 marks Response does not address the question | | |
| L2 | Describe the effects of the hazard and explain how successful attempts have been to reduce the effects. Include at least three developed ideas. | Level 1 (1-3 marks) Demonstrates limited knowledge and understanding of the issue One or more relevant ideas which include limited detail. Ideas describe effects and/or explain how successful attempts to reduce the effect have been, <i>with little or no development</i> . Effects are described and/or attempts are explained <i>in basic terms</i> . eg 90% of building in the city were destroyed Roads, power lines, river embankments and HEP station were all severely damaged Lava flow buried farmland and villages Ash cloud reduced visibility over the surrounding area New buildings are designed to be 'earthquake-proof' | | Level 1 1 limited detail idea or simple statement = 1 mark 2 limited detail ideas or simple statements = 2 marks 2 limited detail ideas or simple statements + named example = 3 marks OR 3 limited detail ideas or simple statements = 3 marks |
| L3 | | Level 2 (4-6 marks) Demonstrates sound knowledge and understanding of the issue One to three relevant developed ideas. Ideas describe effects and/or explain how successful attempts to reduce the effect have been, <i>with</i> | | Level 2 1 developed idea or statement = 4 marks 2 developed ideas or statements = 5 marks |
| EG | | Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinders communication. | | |
| PLC | | | | |

| Question | Expected Answers | Marks | Rationale |
|----------|--|-------|---|
| | <p><i>development.</i> Effects are described and/or attempts are explained <i>clearly.</i> eg Pyroclastic flows of rock fragments mixed with hot ash produced a fast moving stream of red-hot debris. Earthquake triggered a landslide which blocked roads and made it impossible for rescue workers to get to the worst affected areas. Schools were destroyed which trapped thousands of children because there was no warning of the earthquake. The stronger building design with rubber-filled foundations absorbed the shaking, so the buildings did not collapse</p> <p>Full level 2 needs three developed ideas plus a named example. If no example or MEDC example limit to 5 marks.</p> <p>Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.</p> <p>Level 3 (7-8) marks Demonstrates good knowledge and understanding of the issue At least three relevant developed ideas. Ideas both describe effects and explain how successful attempts to reduce the effect have been, <i>with development.</i> Effects are described or attempts are explained <i>clearly.</i></p> <p>Full level 3 needs three developed ideas plus relevant place-specific detail of the example, (such</p> | | <p>3 developed ideas or statements = 6 marks</p> <p>Limit to 5 marks if no named example or MEDC example</p> <p>Level 3 3 developed ideas or statements which make a comprehensive answer (ie describe and explain) = 7 marks</p> <p>A comprehensive answer + place-specific detail = 8 marks</p> <p>Place specific detail – look for something which is</p> |

| | Question | Expected Answers | Marks | Rationale |
|--|----------|---|-------|---|
| | | <p>as place name, number of deaths). If no relevant place-specific detail limit to 7 marks</p> <p>Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.</p> <p>Content guide Tectonic hazard may be an earthquake or volcanic eruption which must be located in an LEDC. Effects could be primary, such as</p> <ul style="list-style-type: none"> • loss of life/injury • loss of homes • destruction of other property/infrastructure. • physical impact of the hazard, eg ground shaking, lava flows, pyroclastic flows, lahars <p>Or secondary, such as</p> <ul style="list-style-type: none"> • homelessness • shortages of food and water • lack of health care • spread of fires • spread of disease <p>Attempts to reduce the effects could include:</p> <ul style="list-style-type: none"> • monitoring volcanoes • hazard mapping • diversion of lava flows • cross-bracing walls of multi-storey buildings • shock absorbers in building foundations • evacuation plans and awareness raising | | <p>unique/clearly identifiable with the case study.</p> |

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