

# **GCSE**

# Geography B

General Certificate of Secondary Education (Short Course)

Unit A772/02: Key Geographical Themes (Higher Tier)

# Mark Scheme for June 2012

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# **Annotations**

Annotation	Meaning
?	Unclear
×	Cross
PI-W	Development
TT'E	Example / reference
ш	Level one
121	Level two
L5	Level three
PIC	Relevant place detail
	Correct point
A	Omission mark
Hati-	Irrelevant, a significant amount of material that does not answer the question
[	Left Bracket
]	Right Bracket
J	Just /Justification

C	uesti	on	Answer	Marks	Guidance
1	(a)	(i)	Soil moisture / groundwater / interception / river	1	✓ Not streamflow
		(ii)	Loss of water from plants/trees Evaporation from trees	1	<b>✓</b>
		(iii)	Farming on low/flat land; saturation occurs more quickly Soil in farming area is compressed / compacted / less permeable by ploughing / grazing cattle; so less infiltration Soil in forest is protected by trees / less compaction by rainfall; so more infiltration Interception by leaves / trees in forest / prevent rain falling onto soil; easier infiltration / less water reaches ground / more evapo-transpiration Roots of trees break up soil; encourage infiltration Trees take up water from soil; doesn't become saturated More impermeable surfaces; less infiltration	4	2 x 2 marks  1 mark per reason ✓ second mark for development (dev)
	(b)	(i)	Leeds Herefordshire North Devon	1	All 3 correct for 1 mark
		(ii)	Generally there are more LAs in SE England with a large number of properties at significant risk of flood / higher risk of significant flooding in SE England (or reverse for NE England) Data such as: No LAs of 5000+ in NE Only two LAs between 2500 – 4999 in NE Most LAs in NE under 1000 Two / three LAs over 7500 in SE	2	2 x 1 mark ✓ 1 mark for comparative statement 1 mark for supporting data
	(c)	(i)	Persistent / prolonged rainfall; cannot be contained within channel Snowmelt / glaciers melting; sudden surge of water	4	2 x 2 marks 1 mark per reason ✓

Question	Answer	Marks	Guidance
	Low / flat land / floodplain alongside river; nothing to stop flow of water  Deforestation / lack of trees in drainage basin; less interception / more surface run-off  Ploughing land downslope; encourages rapid run-off  Levee failure / dam collapse; sudden release of water downstream  Built up areas / urbanisation in drainage basin / tarmac / concrete; creates impermeable surface / more rapid run-off  Lack of investment in flood protection / no flood defences; unable to cope with rising river level  Waterlogged land / soil saturated; unable to soak in Steep valley sides in drainage basin; rapid run-off  Tidal surge; no defences  Small / narrow / shallow river more likely to flood; holds less water  Impermeable rock; cannot infiltrate / more surface run-off		second mark for development (dev) Can accept same explanation twice if appropriate
(ii)	Build / strengthen embankments / levees / make banks higher; prevent river overflowing / carry more water Straighten river course / cut off meanders; to take water away more quickly Build a dam across river; to control water level Afforestation / plant trees; to soak up water Stop deforestation; to prevent further surface run-off Deepen / widen channel; to accommodate more water Flood barriers alongside river; to prevent water overflowing Tidal barrier across estuary; to prevent inflow of sea water Diversionary spillways / overflow channels; to divert excess water Widen / higher bridges; to prevent water damming up behind debris Washlands: to accept flood water	4	4 x 1 mark  1 mark for each valid idea ✓ Can also award additional marks for development  No development mark for named example No credit for warning

Question	Answer	Marks	Guidance
(d)	Case study: river landforms & processes	8	Case study will be marked using 3 levels:
	Indicative content River valley may be in any location  Landform may be from upper or lower course, eg waterfall, rapids, interlocking spurs, meander, ox-bow lake, levees, floodplain, valley.  Credit ideas in text or on diagram(s)		Annotate with L3, L2 or L1 at the end of the answer Use DEV in the answer to show development Use PLC to indicate place specific detail at Level 3  Note carefully: Answer consistently meets the criteria for the level Award mark at top of level  Answer meets the criteria but with some inconsistency Award mark at middle of level  Answer just meets the criteria for the level Award mark at bottom of level
	Level 3 (7–8 marks)  A comprehensive and place and/or process specific answer including well developed ideas which both describe the landform and explain its formation.  Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.		Level 3 A key discriminator of an answer at the top of Level 3 is place detail  Full level 3 answer needs three well developed ideas plus relevant place-specific detail, (such as location, rock type) or process specific detail  Well developed ideas which make a comprehensive answer (i.e. describe and explain) = bottom of Level 3  A comprehensive answer + place-specific detail = top of Level 3

Question	Answer	Marks	Guidance
	Level 2 (4–6 marks)		Level 2
	Demonstrates sound knowledge through developed ideas which describe the landform and/or explain its formation  Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.		A key discriminator of an answer at the top of Level 2 is that description and/or explanation are developed  Full level 2 needs three developed ideas plus a named example of a river valley.
	Level 1 (1–3 marks)		Level 1
	Demonstrates limited knowledge through simple / undeveloped ideas which describe the landform and/or explain its formation.		Full level 1 needs three simple ideas plus a named example of a river valley
	Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinders communication.		Credit name of landform, e.g. waterfall, at bottom of level if no other relevant idea
			If more than one landform credit best scoring.
	<b>0 marks</b> No evidence submitted or the response does not address the question.		

C	uesti	on	Answer	Marks	Guidance
2	(a)	(i)	Easington	1	✓
		(ii)	Highest: Mappleton Aldbrough Lowest: Hilston	1	All 3 correct for 1 mark ✓
		(iii)	Effectiveness of coastal defences Presence of coastal defences / defences in some areas State of repair of coastal defences Sheltered by headland in north Some areas are less affected by strong waves / destructive waves Erosion where absence of defences because sediment trapped where there are defences Difference in geology / hard & soft rocks / boulder clay Width of beach / on narrow beach the land is eroded more	3	3 x 1 mark ✓
	(b)	(i)	Name: Gabions / boulder-filled wire cages revetments / wooden barriers rip raps or rock armour / large boulders and rocks Explanation: absorb the energy of the waves. Name: Sea wall / concrete wall built in front of the cliff Explanation: to deflect / return / bounce off the power of waves / stop waves breaking on cliff / protect land behind Name: Offshore breakwaters Explanation: Force waves to break offshore / dissipates wave energy. Name: Steel sheets erected in cliff face Explanation: Add strength to the cliff / protects the land behind it. Name: Groynes / wooden breakwaters at right angles to cliff Explanation: trap moving beach material / build up protective beach / prevent movement of sand along beach / stop longshore drift	4	2 x 2 marks ✓  1 mark for each name 1 mark for each explanation  Accept description in place of name, if meaning is sufficiently clear  Can credit same explanation twice, if appropriate – eg gabions and rip-raps

Question	Answer	Marks	Guidance
(ii)	Schemes are expensive; money could be spent on other facilities; increase in local taxes Eyesore; deters tourists / unpopular with locals Require maintenance; on-going costs Impact on natural environment; destruction of habitats Interferes with natural coastal processes; creates problems of erosion further along coast Groynes stop movement; after last groyne there is more erosion		2 x 2 marks  1 mark per disadvantage  second mark for development (dev)
(c)	Definition: Sea is allowed to reach its natural position / retreat by itself / erode by removing existing coastal defences / let land erode away / do nothing  Sustainable: Creates new environments for bird migration, nature conservation / reserves / habitats Increases areas of salt marsh Creates natural defence against erosion and flooding Farming & nature conservation can work together Creates recreational opportunities Cheaper option Attractive appearance No materials are used	4	4 x 1 mark  1 mark for each valid idea ✓ Can also award additional marks for development  Reserve 1 mark for definition  Reference to sustainable could be environmental or economic or social

Question	Answer	Marks	Guidance
(d)	Case study: a coastal area & its landforms	8	Case study will be marked using 3 levels:
	Indicative content Coastal area may be in any location  Landform may be formed by erosion or deposition, eg. cliff, headland, wave-cut platform, cave, arch, stack, stump, beach, spit, tombolo, bar.  Credit ideas in text or on diagram(s)		Annotate with L3, L2 or L1 at the end of the answer Use DEV in the answer to show development Use PLC to indicate place specific detail at Level 3  Note carefully: Answer consistently meets the criteria for the level Award mark at top of level  Answer meets the criteria but with some inconsistency Award mark at middle of level  Answer just meets the criteria for the level Award mark at bottom of level
	Level 3 (7–8 marks)  A comprehensive and place and/or process specific answer including well developed ideas which both describe the landform and explain its formation.  Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.		Level 3 A key discriminator of an answer at the top of Level 3 is place detail  Full level 3 answer needs three well developed ideas plus relevant place-specific detail, (such as location, rock type) or process specific detail  Well developed ideas which make a comprehensive answer (i.e. describe and explain) = bottom of Level 3  A comprehensive answer + place-specific detail = top of Level 3

Question	Answer	Marks	Guidance
	Level 2 (4–6 marks)		Level 2
	Demonstrates sound knowledge through developed ideas which describe the landform and/or explain its formation		A key discriminator of an answer at the top of Level 2 is that description and/or explanation are developed
	Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.		Full level 2 needs three developed ideas plus a named example of a coastal area.
	Level 1 (1–3 marks)		Level 1
	Demonstrates limited knowledge through simple / undeveloped ideas which describe the landform and/or explain its formation.		Full level 1 needs three simple ideas plus a named example of a coastal area
	Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinders communication.		Credit name of landform, e.g. stack, at bottom of level if no other relevant idea
			If more than one landform credit best scoring.
	<b>0 marks</b> No evidence submitted or the response does not address the question.		

C	uesti	on	Answer	Marks	Guidance
3	(a)	(i)	Turkey / 9	1	✓
		(ii)	Infant mortality has a negative correlation with GDP/as GDP goes up infant mortality goes down Life expectancy has a positive correlation with GDP/as GDP goes up so does life expectancy Higher GDP = lower infant mortality / Lower GDP = higher infant mortality Higher GDP = higher life expectancy / Lower GDP = lower life expectancy	2	2 x 1 mark ✓ No credit for individual countries
		(iii)	Because: More / better healthcare / medical care; Hospitals; doctors; medicines; operations; immunisation; clinics; midwifes; post-natal care 3 marks maximum on medical care ideas Improved living / housing conditions; Access to safe / clean water supply / hygienic sanitation; Healthier diet / less prone to malnutrition / deficiency diseases / obesity Better education about healthy living More care for old people / retirement homes / pensions More tax is paid	4	4 x 1 mark ✓  3 marks maximum on life expectancy or infant mortality ✓  No credit for stating higher life expectancy or lower infant mortality – need why.  No double credit for same explanation for both life expectancy & infant mortality  1 mark for each valid idea Can also award additional marks for development (dev)
	(b)		Get a job / better job / more skilled job; Earn money / higher pay; Spend money on food / education / family / clothes; Pay tax for government to fund healthcare;  Self-belief / pride / self-esteem Able to read instructions such as machinery/pump; improves farming/irrigation techniques Able to understand contraception/family planning advice; raise status of women/control family size Teach women to read so they can teach children; improve standard of living in future	4	^ more money, more food, more water, better facilities  4x1 mark ✓  1 mark for each valid idea Can also award additional marks for development (dev)  Not: better education, better quality of life

Question	Answer	Marks	Guidance
(c)	Fig. 10 shows change over time/sequence of change Fig. 10 refers to more stages of development / four levels Fig. 11 shows historical situation  Fig. 11 show global distribution of developed/developing countries Fig. 11 shows split between / which countries are LEDCs & MEDCs / development divide	2	2x1 mark ✓  No mark for Fig.  Can refer to either Fig 10 or Fig. 11  Don't need comparison  Accept reasons for rejecting the other Figure
(d)	Doesn't always reach the people who need it; due to poor infrastructure/corruption Aid may be tied to donor country; and have to be used to buy goods/services/arms from donor / donor wants something in return Creates dependency on aid; so government / local people lose incentive to make long-term plans / struggle when aid withdrawn / devalues economy If used inappropriately benefits are short-lived; does not promote sustainability Aid may be directed to capital-intensive project; may not help local people Takes time to be effective; will not help short-term disaster/hardship Aid given as loan; leads to debt / interest must be paid	4	2 x 2 marks  1 mark per disadvantage ✓ second mark for development (dev)  Not effect on NGO / country supplying aid

Question	Answer	Marks	Guidance
(e)	Case study: aid project in an LEDC	8	Case study will be marked using 3 levels:
	Indicative content The aid project can be any scale which must be located in an LEDC. The aid project can be short or long term The aid project can be tied, multi or bi-lateral, NGO or government.  Features could focus on food production, education, family planning, water supply, industry, energy, housing, health care, disaster aid Not fair trade unless part of an aid project  Sustainability could be considered as economic, social or environmental		Annotate with L3, L2 or L1 at the end of the answer Use DEV in the answer to show development Use PLC to indicate place specific detail at Level 3  Note carefully: Answer consistently meets the criteria for the level Award mark at top of level  Answer meets the criteria but with some inconsistency Award mark at middle of level  Answer just meets the criteria for the level Award mark at bottom of level
	Level 3 (7–8 marks)  A comprehensive and place specific answer including well developed ideas which both describe features of the project and explain how sustainable the project is.  Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.		Level 3 A key discriminator of an answer at the top of Level 3 is place detail  Full level 3 answer needs three well developed ideas plus relevant place-specific detail, (such as place name, examples of aid).  Well developed ideas which make a comprehensive answer (i.e. describe features of the project and explain how sustainable it is) = bottom of Level 3  A comprehensive answer + place-specific detail = top of Level 3

Question	Answer	Marks	Guidance
	Level 2 (4–6 marks)		Level 2
	Demonstrates sound knowledge through developed ideas which describe features of the project and/or explain how sustainable the project is.  Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.		A key discriminator of an answer at the top of Level 2 is that descriptions and explanations are developed  Full level 2 needs three developed ideas plus a named example of an LEDC or a place in an LEDC with an appropriate aid project.  A developed answer which focuses on an aid project in an MEDC cannot gain full Level2 credit.  No named LEDC = 5 marks maximum
	Level 1 (1–3 marks)		Level 1
	Demonstrates limited knowledge through simple / undeveloped ideas which describe features of the project and/or explain how sustainable the project is.		Full level 1 needs three simple ideas plus a named example of an LEDC or a place in an LEDC with an appropriate aid project.
	Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinders communication.		Credit name of LEDC and appropriate aid project at bottom of level if no other relevant idea
	<b>0 marks</b> No evidence submitted or the response does not address the question.		

C	Question		Answer	Marks	Guidance
4	(a)	(i)	40	1	Only acceptable answer ✓
		(ii)	Serbia / C	1	✓
		(iii)	People in LEDCs are farmers; which is labour-intensive Little mechanisation of farming in LEDCs; many people still employed in farming Little manufacturing in LEDCs; lack of factories/expensive machinery People in LEDCs lack education / training; can only work in unskilled jobs Lower wages / government incentives in manufacturing in LEDCs; attracts MNCs  Demand for services in MEDCs; due to higher standard of living/more disposable income Decline of mining / farming in MEDCs; due to depletion of resources Decline in manufacturing in MEDCs; due to mechanisation MEDCs rely on cheap imports of primary & secondary goods; no need to produce in the country More developed infrastructure in MEDCs; jobs in transport Better education / training in MEDCs; needed for work in skilled jobs	4	2 x 2  1 mark for each reason ✓ second mark for development (dev)  No credit for terms primary / secondary / tertiary / quaternary because explanation is required not description  No double credit for reasons
	(b)		Industry which involves: Research and development High technology / advanced technology Providing information Footloose Grouped together Small workforce Needs little raw materials Located near university Highly skilled/trained / qualified workforce / graduates eg research science/computer science/biotechnology/ robotics/aerospace engineering	3	3 x 1 mark ✓  Reserve 1 mark for example  ^ new technology, using computers  No credit for example of location (e.g. Cambridge Science Park)  Accept other valid examples  Not computer industry  Not brand names

Question	Answer	Marks	Guidance
(c) (i	Short waves / radiation from sun / sun's rays Sun's rays come to earth / earth absorbs heat / earth heats up Earth radiates heat / reflects heat / sun's rays bounce back Layer of greenhouse gases or named gas / greenhouse gas or named gas in atmosphere Greenhouse gas / named gas caused by cars / vehicles etc. Green house gases absorb radiation / trap rays / cannot escape Atmosphere heats up	4	<ul> <li>4 x 1 mark ✓</li> <li>1 mark for each valid idea</li> <li>Can also award additional marks for development (dev)</li> <li>Don't credit 'heat from sun' for radiation</li> <li>Not deforestation</li> <li>^ gases (need greenhouse gas or named gas)</li> </ul>
(i	) More industrial development / factories; produces more greenhouse gases / CO <sub>2</sub> / NO <sub>2</sub> More car ownership / travel; produces more greenhouse gases/named gases / CO <sub>2</sub> / NO <sub>2</sub> Higher standard of living; more demand for electricity More use of electricity; more greenhouse gases / burn more fossil fuels Greater reliance on fossil fuels to support development; release more greenhouse gases LEDCs rely on farming / primary sector; less emissions than manufacturing Large scale cattle farming; higher methane emissions	4	2 x 2  1 mark for each reason ✓ second mark for development (dev)  Only credit 'greenhouse gases' once but allow named greenhouse gases for second development mark  ^more transport, more pollution, more gases

Question	Answer	Marks	Guidance
(d)	Case study: a multi-national company	8	Case study will be marked using 3 levels:
	Indicative content The company can operate in any country  Effects on local people could be positive or negative and focus on jobs, training, investment, exploitation, environmental pollution  Effects on the economy could be positive or negative and focus on development, influence of the MNC within the country.		Annotate with L3, L2 or L1 at the end of the answer Use DEV in the answer to show development Use PLC to indicate place specific detail at Level 3  Note carefully: Answer consistently meets the criteria for the level Award mark at top of level  Answer meets the criteria but with some inconsistency Award mark at middle of level  Answer just meets the criteria for the level Award mark at bottom of level
	Level 3 (7–8 marks)  A comprehensive and place specific answer including well developed ideas which explain how the MNC affects both local people and the economy of the country Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.		Level 3 A key discriminator of an answer at the top of Level 3 is place detail  Full level 3 answer needs three well developed ideas plus relevant place-specific detail, (such as place name, types of employment).  Well developed ideas which make a comprehensive answer (i.e. explain the effects on local people and the country's economy) = bottom of Level 3  A comprehensive answer + place-specific detail = top of Level 3

Question	Answer	Marks	Guidance
	Level 2 (4–6 marks) Demonstrates sound knowledge through developed ideas which explain how the MNC affects local people and/or the economy of the country.  Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.		Level 2 A key discriminator of an answer at the top of Level 2 is that explanations are developed  Full level 2 needs three developed ideas plus a named example of an MNC and a country or a place in a country in which it operates.
	Level 1 (1–3 marks)		Level 1
	Demonstrates limited knowledge through simple / undeveloped ideas which explain how the MNC affects local people and/or the economy of the country.		Full level 1 needs three simple ideas plus a named example of an MNC and a country or a place in a country in which it operates.
	Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinders communication.		Credit name of an MNC and appropriate country at bottom of level if no other relevant idea
	O marks No evidence submitted or the response does not address the question.		

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