RECOGNISING ACHIEVEMENT

GCSE

Geography B

General Certificate of Secondary Education

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

Mark Scheme for June 2013

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All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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Annotations

Annotation	Meaning
	Correct response
	Incorrect response
NBOD	Benefit of the doubt not given
^	Information omitted
	Unclear
[	Open bracket
]	Close bracket
DEV	Development
EG	Example/reference
PLC	Relevant place detail
L1	Level 1
L2	Level 2
L3	Level 3
J	Just

MARK SCHEME

Question			Answer	Marks	Guidance
1	(a)		Area drained by a river/drainage basin/catchment area of a river. And its tributaries/watershed is the edge/rain which falls within this area goes into the river.	2	2 x 1 mark (√)
	(b)		Mozambique. Caused most deaths/1080 killed/most killed. Highest number of people affected by it/7.6 million affected.	3	3 x 1 mark (√) 1 mark for name of country 2 marks for supporting data No credit for number of floods.
	(c)		Ideas such as: • More rivers/lakes in some countries / confluence of rivers **so** more potential for flooding • Higher discharge / bigger rivers **due to** more rainfall • More settlements/higher population density in areas at risk **so** more people affected by floodwater • Less presence/knowledge of management strategies **such** as floodplain zoning/strengthening embankments • Better operation of flood warning systems affects **so** more able to move away from affected areas • Human activities such as deforestation/soil exhaustion **results** in greater run-off/silting of river channel • Flatter land/bigger floodplain/low-lying land **so** bigger area affected by flooding. • Poorer countries **so** less able to protect people against flooding / less money to re-build • More urbanisation/impermeable rock **so** less infiltration	4	2 x 2 1 mark for each valid reason identified (√). 1 mark for each valid explanation which must be coherently linked to a reason identified (DEV).

Question			Answer	Marks	Guidance
			• Rivers flow through different countries **so** activities upstream may affect countries lower down • River reaches sea in Mozambique **so** high tides prevent flood water escaping • Mouth of river/delta so most of rivers flow towards it/greater volume of water.		
	(d)		Ideas such as: • Lose homes/homes destroyed **so** have nowhere to live/need to re-build homes • Crops destroyed/farmland flooded/cattle drowned **so** malnutrition/no food/hunger • Crops destroyed/farmland flooded/cattle drowned **so** farmers lose income • Drinking water contaminated by floodwater/waste **so** typhoid/cholera outbreaks • Germs breed in wet conditions/stagnant water **so** spread of disease such as malaria • Roads/bridges destroyed **so** unable to travel/get to work/get to town • Damage to transport infrastructure **so** unable to get aid to affected area • No crops to sell/loss of job **so** get into debt • Business/workplace flooded **so** lose job • People die **so** children are orphans/no-one to earn money/trauma.	4	2 x 2 marks 1 mark for each description (√). 1 mark for each valid explanation which must be coherently linked to the description (DEV) The explanation may be linked to any valid description. ^ lower quality of life/standard of living.
	(e)		Methods such as: • Build/strengthen embankments/levees/make banks higher **to** prevent river overflowing (dev) • Straighten river course/cut off meanders **to** take water away more quickly (dev) • Build a dam across river **to** control water level (dev)	4	4x1 mark (√) 1 mark for basic description of method. Only credit reference to one method If more than 1 method credit best answer.

Question			Answer	Marks	Guidance
			• Afforestation/plant trees **to** soak up water (dev) more interception (dev) less rain goes into river (dev) • Stop deforestation **to** prevent further surface run-off (dev) • Deepen/widen channel **to** accommodate more water (dev) • Flood barriers alongside river **to** prevent water overflowing (dev) • Tidal barrier across estuary **to** prevent inflow of sea water (dev) • Diversionary spillways/overflow channels **to** divert excess water (dev) • Widen/raise bridges **to** prevent water damming up behind debris (dev) • Early warning system **so** people can move away from river / to shelter (dev) • Cluster villages **to** let people live above flood level (dev) • Drains/drainage channels **to** take away excess water (dev) • Flood plain zoning **to** control development on areas likely or allowed to flood (dev). **Sustainability** ideas such as: • Environmental: afforestation will create new habitats **to** support wildlife in the area • Economic: a dam is very expensive **so** only worth doing if large cities are in danger of being flooded • Social: make banks higher **to** protect villages **so** people continue to live in the area/use the river for irrigation.		Credit further development/details of method to 3 marks maximum. 1 mark reserve for explanation of how sustainable the method is. Can score up to 2 marks for consideration of sustainability – which may come from social or environmental or economic factors. NOT: cheap but accept cheaper if compared to other method. Accept expensive without qualification.

Question	Answer	Marks	Guidance
(f)	**Case study: river landforms and processes** **Indicative content** River valley may be in any location. Landforms may be from upper or lower course, e.g. waterfall, rapids, interlocking spurs, meander, ox-bow lake, levees, floodplain, valley. Credit how landform has changed in the past or may change further in the future. No credit for human impacts on change in the landform. **Level 3 (7–8 marks)** A comprehensive and place specific answer including **well developed ideas** which **both** describe the landform **and** explain how natural processes may change it over time.	8	Case study will be marked using 3 levels: Annotate with **L3**, **L2** or **L1** at the end of the answer Use **EG** or highlight to show valid example Use **DEV** in the answer to show development Use **PLC** to indicate place specific detail at Level 3 Use **IRRL** to indicate material which does not answer the question. *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** 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, named waterfall or gorge). Well developed ideas which make a **comprehensive** answer (i.e. describe the landform and explain how natural processes have changed it) = 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 describe the landform **and/or** explain how natural processes may change it over time. **Level 1 (1–3 marks)** Demonstrates limited knowledge through **simple / undeveloped** ideas which describe the landform **and/or** explain how natural processes may change it over time. **0 marks** No evidence submitted or the response does not address the question. **Spelling, punctuation and grammar** (SPaG) are assessed using the separate marking grid on page 32.	3	**Level 2** 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** Full level 1 needs three simple ideas plus a named example of a river valley. Credit name of river valley at bottom of level if no other relevant idea.

Question			Answer	Marks	Guidance
2	(a)		**Hydraulic action** Waves force air into cracks/force of water hitting the cliff. **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.	2	1 mark for name (√) 1 mark for description (√) Allow 1 mark if name and description don't match up.
	(b)		**Two** clusters/groups of counties. Group in central area / middle / west / north / north west. Including Marin/San Francisco/San Mateo/Santa Cruz **(**need at least two**).** Group in south / south west / south east. Including Los Angeles/Orange **(**need both).	3	3 x 1 (√) Clusters ^ 1 mark for each reference to group/cluster. 1 mark maximum for named counties as development of cluster. No mark for list of counties. Not 'on the coast'.
	(c)		In some counties there will be more expensive properties **because** of demand/reputation of area/tourism/beautiful landscape. In some counties there will be more buildings/skyscrapers on coast **so** this will affect total value at risk. In some counties there will be higher population density **so** there will be more buildings at risk.	4	2 x 2 1 mark for each reason identified (√) 1 mark for development of each reason (DEV).

Question			Answer	Marks	Guidance
			In some counties there will be better protection against erosion/better sea defences **so** less properties at risk. In some counties there will be more erosion / areas of softer rock / destructive waves **so** risk of more buildings being affected. In some counties there will be industries on coast **because of** need to import / export.		
	(d)		Ideas such as: • (New bike path / car park) encourages more cyclists/ attracts more visitors **so** more income/jobs for the area (dev) • (Beach replenishment) increases size of the beach **which** makes a natural defence /protects land behind (dev) **so** beach will take longer to erode / absorbs energy of sea (dev) • (Beach replenishment) creates new environments for wildlife/nature conservation/more natural habitats • Project is lower cost / cheap to do • Cheap to maintain • Makes the area look more attractive/does not spoil the appearance of the area • Natural landscaping • (Beach replenishment) doesn't use up non-renewable resources.	4	4 x 1 mark (√) 1 mark for each valid explanation. Credit development of ideas Can credit more than one development of same idea (eg beach replenishment). Credit economic, environmental and social sustainability with no reserve or maximum. No credit just for what is shown in Fig. • New car park • New bike bath • Beach replenishment • Sand and pebbles Looking for what they do.
	(e)		**Description:** Gabions; boulder-filled wire cages Revetments; wooden barriers; rip raps or rock armour; large boulders and rocks.	4	4 x 1 mark (√) Only credit reference to one method. If more than 1 method credit best answer.

Question			Answer	Marks	Guidance
			Explanation: Waves break onto defences; absorb the energy of the breaking waves. **Description:** Sea wall; concrete wall built in front of the cliffs. **Explanation:** To deflect the power of waves and protect land behind the wall. **Description:** Offshore breakwaters; barriers built in the sea. **Explanation:** Force waves to break offshore; dissipates wave energy. **Description:** Steel sheets erected in cliff face. **Explanation:** Add strength to the cliff; stops it crumbling/slumping. **Description:** Groynes; wooden breakwaters at right angles to cliff. **Explanation:** Trap moving beach material; reduce longshore drift; build up protective beach.		2 marks maximum for description. 3 marks maximum for explanation. No credit for beach replenishment. No credit for managed retreat (does not protect the coastline). NOT: Stop longshore drift.
	(f)		**Case study: coastal landforms and processes** **Indicative content** Coastal area may be in any location. Landform may be changed by erosion or deposition, e.g. cliffs, headland, bay, cove, wave-cut platform, cave, arch, stack, stump, beach, spit, tombolo, bar.	8	Case study will be marked using 3 levels: Annotate with **L3**, **L2** or **L1** at the end of the answer Use **EG** or highlight to show valid example Use **DEV** in the answer to show development Use **PLC** to indicate place specific detail at Level 3 Use **IRRL** to indicate material which does not answer the question.

Question			Answer	Marks	Guidance
			Credit how landform has changed in the past or may change further in the future. No credit for human impacts on change in the landform. **Level 3 (7–8 marks)** A comprehensive and place specific answer including **well developed** ideas which **both** describe the landform **and** explain how natural processes may change it over time. **Level 2 (4–6 marks)** Demonstrates sound knowledge through **developed** ideas which describe the landform **and/or** explain how natural processes may change it over time.		*Note carefully:* *Answer consistently meets the criteria for the level* *Award mark at t**op** 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** 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, named feature such as Durdle Door). Well developed ideas which make a **comprehensive** answer (i.e. describe the landform and explain how natural processes may change it) = bottom of Level 3. A comprehensive answer + **place-specific detail** = top of Level 3. **Level 2** 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 coastal area.

Question			Answer	Marks	Guidance
			Level 1 (1–3 marks) Demonstrates limited knowledge through **simple / undeveloped** ideas which describe the landform **and/or** explain how natural processes may change it over time. **0 marks** No evidence submitted or the response does not address the question. **Spelling, punctuation and grammar** (SPaG) are assessed using the separate marking grid on page 32.	3	**Level 1** Full level 1 needs three simple ideas plus a named example of a coastal area. Credit name of coastal area at bottom of level if no other relevant idea.

Question			Answer	Marks	Guidance
3	(a)		Greatest food shortages/level 5 in Somalia. Food shortages worse/level 4 in east of the area / Somalia / **parts of** Ethiopia/Kenya/Djibouti. No/least shortage/level 1 or 2 in north/west of the area / inland / Kenya / Ethiopia. Most/highest number of people affected by food shortages in Ethiopia. Comparison of two countries: e.g. more people affected by food shortages in Somalia than Kenya or using two figures e.g. Somalia has 3.7 million affected, Kenya has 2.4 million.	3	3 x 1 (√) Credit 1 mark maximum for pair of figures showing number of people affected by food shortage.
	(b)		Lack of rain/less rain than normal/no rain/below average rainfall. Over **long** period of time. 15 consecutive days with less than 0.2mm precipitation (=2 marks). Lower than average rainfall over two year period (=2 marks). Not enough rain to support people/grow crops/drink.	2	2 x 1 (√)

Question			Answer	Marks	Guidance
	(c)		Overgrazing/rearing too many cattle on land **so** little grass grows and soil erosion. Overcultivation/growing too many crops on the land **so** soil becomes infertile. Deforestation/cutting down trees **so** land exposed to erosion. Irrigation/using groundwater in farming **so** water table falls/rivers dry up. Water extraction/over-extraction for settlements **so** water table falls/rivers dry up. Pollution of existing water supplies **causing** illness/disease/making water shortage worse. War/civil war prevents movement of people **so** they cannot get to water sources. Migration of large number of people **so** insufficient supplies due to population pressure. Wasting water **by** overuse of sprinklers in gardens etc.	4	2 x 2 1 mark for each description (√). 1 mark for each valid explanation which must be coherently linked to the description (DEV). No credit for global warming.
	(d)		Ideas such as: • Build low walls/bunds across fields **to** reduce run off • Create sand dams to trap water **which can be** used to irrigate farmland • 'Magic stones'/piles of stones/ stone lines to collect water through condensation **which can be** used to irrigate farmland • Plant drought-resistant crops **which** will grow in dry conditions/withstand lack of water	4	2 x 2 1 mark for basic description of farming method (√). 1 mark for development/details of method (DEV). Don't accept irrigation on its own.

Question			Answer	Marks	Guidance
			• Drip/sprinkle irrigation **to** focus water on small area where most useful / doesn't waste water which would flow away • Terracing on hillsides **to** reduce run-off / encourage infiltration • Dig wells **to** reach underground water • Collection/storage tanks/reservoir **to** save water for future use.		
	(e)		Ideas such as: • More secure/reliable supplies of water in drought risk areas • Better equipped to deal with drought, **eg,** reservoirs/distribution pipelines (dev) • Can afford storage/distribution systems • Less direct dependence on water for food production/farming • Can afford to import food if harvests fail **so** less risk of hunger/famine, (dev) • Less risk of disease from using contaminated supplies if fresh water sources dry up • Can import water • Water conservation measures/rationing will be introduced **e.g.** hosepipe ban (dev) • Development of drought resistant crops • Monitor level of water shortage/possibility of drought • Can afford desalination plants **which** turn sea water to fresh water (dev).	4	4 x 1 mark (√) 1 mark for each explanation. Credit development of ideas. Credit ideas which explain why the impact is more severe in LEDC's.

Question			Answer	Marks	Guidance
	(f)		**Case study: climatic hazard in an MEDC** **Indicative content** Climatic hazard may be drought or a tropical storm which must be located in an **MEDC**. Allow any appropriate climatic hazard including flooding. Climatic conditions could include rainfall, temperature, wind patterns, wind speeds, ocean temperatures. Impacts on people could include loss of life, injuries, destruction of property, homelessness, food shortages. **Level 3 (7–8 marks)** A comprehensive and place specific answer including **well developed** ideas which **both** describe the climatic conditions which caused the hazard **and** explain the impacts of the hazard on people.	8	Case study will be marked using 3 levels: Annotate with **L3**, **L2** or **L1** at the end of the answer Use **EG** or highlight to show valid example Use **DEV** in the answer to show development Use **PLC** to indicate place specific detail at Level 3 Use **IRRL** to indicate material which does not answer the question. *Note carefully:* *Answer consistently meets the criteria for the level* *Award mark at t**op** 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** 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 climate data, location). Well developed ideas which make a **comprehensive** answer (i.e. describe the climatic conditions causing the hazard and explain the impact of the hazard on people) = 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 describe the climatic conditions which caused the hazard **and/or** explain the impacts of the hazard on people. **Level 1 (1–3 marks)** Demonstrates limited knowledge through **simple / undeveloped** ideas which describe the climatic conditions which caused the hazard **and/or** the impacts of the hazard on people. **0 marks** No evidence submitted or the response does not address the question. **Spelling, punctuation and grammar** (SPaG) are assessed using the separate marking grid on page 32.	3	**Level 2** 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 and located example of a climatic hazard in an MEDC or place in an MEDC. A developed answer which focuses on a climatic hazard in an **LEDC** cannot gain full Level 2 credit. **Level 1** Full level 1 needs three simple ideas plus a named and located example of a climatic hazard in an MEDC or a place in an MEDC. Credit name and MEDC location of climatic hazard at bottom of level if no other relevant idea. An answer which focuses on a tectonic hazard cannot be credited.

Question			Answer	Marks	Guidance
4	(a)	(i)	On/near plate boundary. On convergent /destructive plate boundaries/where two plates moves towards each other. On boundary /between Pacific and North American plates. On boundary / between Nazca and South American plates/ off west coast of South America. On boundary / between Pacific and Philippine plates **or** Pacific and Eurasian plates. On boundary / between continental and oceanic plates.	3	3 x 1 mark (√). Do not credit ring of fire or edge of Pacific.
		(ii)	Convergent/destructive. Divergent/constructive.	2	2 x 1 mark (√)
	(b)		Two plates slide past each other. Along fault line/line of weakness. Plates are moving in opposite directions/same direction at different speeds. Plates lock/stick together/friction between plates. Pressure / tension builds up between plates. Sudden movement/plates jump forward/pressure suddenly released. Send out shock waves / releases energy.	4	4 x 1 marks (√) 1 mark for each explanation. Credit development of ideas. Credit on diagram or in text to 4 maximum. 2 marks maximum for destructive margin: • Sticking • Pressure • Release • Shock waves. No credit for constructive margin.

Question	Answer	Marks	Guidance
(c)	Ideas such as: **Safe:** • People are prepared **because** they have emergency pack (dev) • People live in strengthened/earthquake-proof / retrofit buildings – **which** will not collapse with minor tremors (dev) cross-bracing (dev) base isolators (dev) • Education and advertising of what action to take **so** people turn off gas and electricity (dev) • Authorities have emergency plans to react to earthquake **such as** provide shelter/food/water/search and rescue (dev) evacuation drills (dev) • Underground sensors can detect tremors and trigger warnings of approaching shock waves **so** give feeling of security (dev) • Country is rich **so** can afford protection schemes / training / emergency services (dev). **Not safe:** • Impossible to predict when/where an earthquake will happen **so** cannot evacuate (dev) • Many people do not live in strengthened buildings **which** will collapse (dev) • Areas at risk of liquefaction **which** may result in collapse of buildings (dev) • Older buildings/roads etc are not strengthened **so** will collapse (dev) • Coastal/low-lying areas at risk from tsunami **which** is more dangerous than earthquake (dev) • But people prepared to take risk/don't think it will affect them **so** have a reason to stay in the area/family/job (dev).	4	4 x 1 mark (√) 1 mark for each valid explanation. Credit development of ideas Can credit more than one development of same idea e.g. people are prepared **so** have emergency pack **and** know to turn off gas and electricity. Ignore reference to safe/not safe - look for ideas. Credit explanation from both sides of argument but do not double credit opposite ideas, eg strengthened buildings.

Question	Answer	Marks	Guidance
(d)	Ideas such as: • Easier to predict volcanoes/give early warning of possible eruption • Monitor rising magma/bulging of volcano/change in gas emissions/increase in ground temperature/past history of eruptions (to 2 marks) • Warnings allows for evacuation plans to be implemented • People escape from danger area • Hazard mapping show areas of greatest risk • Impacts of volcanic eruption felt over a smaller area • Volcanoes in less densely populated/less built up areas/rural areas • Can control effects of volcanoes / construct diversion channels /walls.	4	4 x 1 mark (√) 1 mark for each valid reason. Credit development of ideas. Accept answers which explain more impact from earthquakes.
(e)	**Case study: tectonic hazard event in an LEDC** **Indicative content** Tectonic hazard may be an earthquake or a volcanic eruption which must be located in an **LEDC.** Accept tsunami if related to an earthquake. Impacts could be primary or secondary and could include effects on people, buildings, economy, physical landscape. Preparation difficulties could include finance, expertise, infrastructure, planning, unpredictability of the hazard.	8	Case study will be marked using 3 levels: Annotate with **L3**, **L2** or **L1** at the end of the answer Use **EG** or highlight to show valid example Use **DEV** in the answer to show development Use **PLC** to indicate place specific detail at Level 3 Use **IRRL** to indicate material which does not answer the question. *Note carefully:* *Answer consistently meets the criteria for the level* *Award mark at t**op** 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.*

Question			Answer	Marks	Guidance
			Level 3 (7–8 marks) A comprehensive and place specific answer including **well developed** ideas which **both** describe the impacts of the tectonic hazard **and** explain why it may be difficult to prepare for the hazard. **Level 2 (4–6 marks)** Demonstrates sound knowledge through **developed** ideas which describe the impacts of the tectonic hazard **and/or** explain why it may be difficult to prepare for the hazard. **Level 1 (1–3 marks)** Demonstrates limited knowledge through **simple / undeveloped** ideas which describe the impacts		**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 cost of damage, location). Well developed ideas which make a **comprehensive** answer (i.e. describe the impacts of the hazard and explain why it may be difficult to prepare for the hazard) = bottom of Level 3. A comprehensive answer + **place-specific detail** = top of Level 3. **Level 2** 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 and located example of a tectonic hazard in an LEDC or place in an LEDC. A developed answer which focuses on a tectonic hazard in an **MEDC** cannot gain full Level 2 credit. **Level 1** Full level 1 needs three simple ideas plus a named and

Question			Answer	Marks	Guidance
			of the tectonic hazard **and/or** explain why it may be difficult to prepare for the hazard. **0 marks** No evidence submitted or the response does not address the question. **Spelling, punctuation and grammar** (SPaG) are assessed using the separate marking grid on page 32.	3	located example of a tectonic hazard in an LEDC or a place in an LEDC. Credit name and LEDC location of tectonic hazard at bottom of level if no other relevant idea. An answer which focuses on a climatic hazard cannot be credited.

Question			Answer	Marks	Guidance
5	(a)		Answers such as: • North/North east of Cambridge/city centre/colleges • South of A14 • SE of Histon • 3–4 km from city centre • 3 km from Histon • Edge of built-up area / outskirts of city.	3	3 x 1 mark (√) Credit distance and direction from named specific features for 2 marks. Maximum 1 mark for 'near to/next to/alongside' statements. Check accuracy of answers on OS map extract. No credit for grid reference/reference to main road/dual carriageway.
	(b)		• Research • Development of new products/processes • High technology • Information provision • Research science/computer science/ /biotechnology/robotics/aerospace engineering.	2	2 x 1 mark (√) Accept the phrase 'research and development' for 2 marks. Allow 1 mark for appropriate example. NOT: IT named companies.
	(c)		Located on edge of city/rural – urban fringe **so** more space/room to expand/cheaper land. Located at junction of main roads / good transport links **which gives** easy access for workers/visitors/transport products. Located near university/colleges **for** latest developments/skilled workforce/expertise/reputation. Located near countryside **so it has** attractive image/healthy working environment. Footloose industry **so doesn't** depend on large quantity of raw materials/large workforce/ products are small.	4	2 x 2 marks 1 mark for each valid reason identified (√). 1 mark for development of each reason (DEV). Answers do not require specific map evidence, such as the number of an A road. NOT: Cambridge for workers Agglomeration benefits.

Question			Answer	Marks	Guidance
	(d)		Ideas such as: **Similarity:** • **Government** may provide loans/grants to encourage location in specific areas • **Labour** supply needs skilled/highly trained/specialist workers • **Market** may be global • **Land availability/site** possibly greenfield • **Transport** links to markets/customers • **Agglomeration** links to component manufacturer/research facilities. **Difference:** • **Raw materials** are small in quantity for quaternary in comparison to bulky for secondary industry • **Location** industry is footloose in comparison to tied to raw materials/power supply/water supply • **Labour supply** is highly trained in comparison to unskilled • **Transport** links are mainly road/air in comparison to rail/sea • **Inertia** can re-locate easily in comparison to tied to raw materials. • **Size of site** large secondary in comparison to small quaternary.		2 x 2 marks 1 mark each for 1 similarity and 1 difference (√). Credit development of similarity and difference for second mark (DEV). No double credit for similarities and differences of same factor eg labour supply.

Question			Answer	Marks	Guidance
	(e)		Ideas such as: • Look for lowest production costs • Large labour supply • Cheap workforce / low wages / no minimum wage • Workers will work long hours • Increase profits • Costs affected by tax rates /government subsidies • Globalisation/world scale of production • Improvements in global communications/internet • Improvements in transport • Worldwide distribution is now much cheaper, **eg** container shipping (dev) • Reduction in trade barriers **has led to** growth of international trade (dev) • Access to expanding markets • Markets are changing **so** it is cheaper to locate near to new market. (dev) • Access to / exhaustion of raw materials.	4	4 x 1 mark (√) 1 mark for each valid reason. Credit development of ideas. Accept push factors as well as pull factors.
	(f)		**Case study: economic development and the environment** **Indicative content** The chosen economic activity may be primary, secondary, tertiary or quaternary, including farming, mining, manufacturing, services, tourism in any location. If more than one economic activity, credit the best activity. Causes of the environmental damage could be air/water/noise pollution, visual intrusion, loss of	8	Case study will be marked using 3 levels: Annotate with **L3**, **L2** or **L1** at the end of the answer Use **EG** or highlight to show valid example Use **DEV** in the answer to show development Use **PLC** to indicate place specific detail at Level 3 Use **IRRL** to indicate material which does not answer the question. *Note carefully:* *Answer consistently meets the criteria for the level* *Award mark at **top** of level* *Answer meets the criteria but with some inconsistency*

Question	Answer	Marks	Guidance
	wildlife/habitats, soil erosion, landscape degradation. Ideas to manage conflict could be pollution controls, research into 'green' technology, planning of economic activity, soil conservation, international agreements. **Level 3 (7–8 marks)** A comprehensive and place specific answer including **well developed** ideas which **both** describe how the economic activity has caused environmental damage **and** explain how the conflict between the economic development and the environment has been managed. **Level 2 (4–6 marks)** Demonstrates sound knowledge through **developed** ideas which **both** describe how the economic activity has caused environmental damage **and/or** explain how the conflict between the economic development and the environment has been managed.		*Award mark at **middle** of level* *Answer just meets the criteria for the level* *Award mark at **bottom** of level.* **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 type of wildlife or vegetation affected, location). Well developed ideas which make a **comprehensive** answer (i.e. describe how the economic activity has caused damage and explain how the conflict between economic development and the environment has been managed) = bottom of Level 3. A comprehensive answer + **place-specific detail** = top of Level 3. **Level 2** 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 and located example of an economic activity.

Question			Answer	Marks	Guidance
			Level 1 (1–3 marks) Demonstrates limited knowledge through **simple / undeveloped** ideas which describe how the economic activity has caused environmental damage **and/or** explain how the conflict between the economic development and the environment has been managed. **0 marks** No evidence submitted or the response does not address the question. **Spelling, punctuation and grammar** (SPaG) are assessed using the separate marking grid on page 32.	3	**Level 1** Full level 1 needs three simple ideas plus a named and located example of an economic activity. Credit name and location of an economic activity at bottom of level if no other relevant idea

Question			Answer	Marks	Guidance
6	(a)		Nepal has lower HDI (than the World). HDI increases over time for both Nepal and the World. Gap between HDI of Nepal and the World narrows over time/HDI rises more quickly in Nepal than the World / HDI rises at similar rate in Nepal & World. Credit paired data e.g. in 1980 HDI for Nepal was 0.21, for world it was 0.45/e.g. 2010 HDI for Nepal was 0.43, for world it was 0.62. e.g. increase in HDI between 1980 & 2010 was 0.22 in Nepal, 0.17 in World.	3	3 x 1 mark (√) Answer must relate to both Nepal and the world. Maximum 1 mark for comparative paired data. Allow tolerance of 0.02 on data from graph.
	(b)		Average number of years/average age. A person can expect to live/at which people die.	2	2 x 1 mark (√)
	(c)		**Birth rate:** • LEDCs have higher birth rates/MEDCs have lower birth rates • Reflects family planning • Birth control measures • Attitudes towards children/women. **Car ownership**: • LEDCs have lower levels of car ownership/MEDCs have higher levels of car ownership • Reflects level of affluence • Spending on road infrastructure • Availability of low-price cars. **Infant mortality rate:** • LEDCs have higher infant mortality rates/MEDCs have lower infant mortality rates	4	2 x 2 1 mark for each basic explanation (√). 1 mark for development of each idea or second basic explanation of measure (DEV). Only credit two measures. No credit for explaining what the indicator is.

Question			Answer	Marks	Guidance
			• Reflects level of health care (up to 2 marks) • Post-natal care • Support for mothers. **Internet access:** • LEDCs have lower rates of internet access/MEDCs have higher rates of internet access • Electricity supply • Spending on IT provision • Spread of wireless network.		
	(d)		Ideas such as: • Improve personal health/hygiene • People are healthier **so** can work/earn money (dev) • Less susceptible to disease **e.g.** typhoid / chorea/dysentery (dev) • Longer life expectancy • Economy grows • Cleaner food / safer to eat • Time saved / don't have to walk to collect water **so** more time for farming/working/going to school (dev) • Possible to store water for future use/guard against drought. • People don't suffer from dehydration • Grow more crops/improves yield **so** reduces malnourishment/starvation (dev).	4	4 x 1 mark (√) 1 mark for each valid benefit. Credit development of ideas. No credit for what is shown in Fig. 9 • Drink clean water • Wash food • Wash themselves • Wash clothes • Irrigation/water fields/water crops. Need benefits of these. ^ better quality of life/better standard of living.
	(e)		Ideas such as: • Doesn't always reach the people who need it • Poor infrastructure/corruption • Aid may be tied to donor country • Has to be used to buy goods/services/arms from donor	4	4 x 1 mark (√) 1 mark for each valid idea. Credit development of ideas.

Question			Answer	Marks	Guidance
			• Creates dependency on aid / aid will eventually stop • Government loses incentive to make long-term plans • If used inappropriately benefits are short-lived • Aid may be directed to capital-intensive project • May not help local people • Large-scale scheme may damage the environment • May lead to resource depletion, eg, deforestation, soil erosion • May result in future debt / loans have to be repaid • Aid may suffer from compassion fatigue in donor countries. • Short –term / not long-term • Credit examples from specific schemes e.g. goats require food/vet care • E.g. Desertification caused by goats overgrazing.		

Question			Answer	Marks	Guidance
	(f)		**Case study: an economic activity in an LEDC** **Indicative content** The chosen economic activity may be primary, secondary, tertiary or quaternary but must be in an **LEDC**. Factors influencing the location could be labour, transport, markets, raw materials, capital, physical factors, technology. Effects on people in the local area could be jobs, wages, training, infrastructure, pollution, exploitation. No credit for global effects such as global warming. Credit relevant answers which focus on location and effects on local people of an aid project to L2. **Level 3 (7–8 marks)** A comprehensive and place specific answer including **well developed** ideas which explain the factors which influence the location of the economic activity **and/or** describe its effects on people in the local area.	8	Case study will be marked using 3 levels: Annotate with **L3**, **L2** or **L1** at the end of the answer Use **EG** or highlight to show valid example Use **DEV** in the answer to show development Use **PLC** to indicate place specific detail at Level 3 Use **IRRL** to indicate material which does not answer the question. *Note carefully:* *Answer consistently meets the criteria for the level* *Award mark at t**op** 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** 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 mineral mined, location). Well developed ideas which make a **comprehensive** answer (i.e. explain the factors which influence the location of the economic activity and/or describe its effects on people in the local area.) = 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 the factors which influence the location of the economic activity **and/or** describe its effects on people in the local area. **Level 1 (1–3 marks)** Demonstrates limited knowledge through **simple / undeveloped** ideas which explain the factors which influence the location of the economic activity **and/or** describe its effects on people in the local area. **0 marks** No evidence submitted or the response does not address the question. **Spelling, punctuation and grammar** (SPaG) are assessed using the separate marking grid on page 32.	3	**Level 2** A key discriminator of an answer at the top of Level 2 is that explanation and/or description are developed. Full level 2 needs three developed ideas plus a named and located example of an economic activity in an LEDC or place in an LEDC. A developed answer which focuses on an economic activity in an **MEDC** cannot gain full Level 2 credit. A developed answer which focuses on an **aid project** in an LEDC cannot gain full Level 2 credit. **Level 1** Full level 1 needs three simple ideas plus a named and located example of an economic activity in an LEDC or place in an LEDC. Credit name and LEDC location of economic activity at bottom of level if no other relevant idea.

Spelling, punctuation and grammar (SPaG) assessment grid

High performance 3 marks
Candidates spell, punctuate and use rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision.
Intermediate performance 2 marks
Candidates spell, punctuate and use rules of grammar with considerable accuracy and general control of meaning in the context of the demands of the question. Where required, they use a good range of specialist terms with facility.
Threshold performance 1 mark
Candidates spell, punctuate and use rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately.

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