

Mark Scheme (Results)

Summer 2017

Pearson Edexcel GCSE In Geography B (5GB1F/01) Unit 1: Dynamic Planet



Edexcel and BTEC Qualifications

Edexcel and BTEC qualifications are awarded by Pearson, the UK's largest awarding body. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information visit our qualifications websites at www.edexcel.com or www.btec.co.uk. Alternatively, you can get in touch with us using the details on our contact us page at www.edexcel.com/contactus.

Pearson: helping people progress, everywhere

Pearson aspires to be the world's leading learning company. Our aim is to help everyone progress in their lives through education. We believe in every kind of learning, for all kinds of people, wherever they are in the world. We've been involved in education for over 150 years, and by working across 70 countries, in 100 languages, we have built an international reputation for our commitment to high standards and raising achievement through innovation in education. Find out more about how we can help you and your students at: www.pearson.com/uk

Summer 2017
Publications Code 5GB1F_01_1706_MS
All the material in this publication is copyright
© Pearson Education Ltd 2017

General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question	Correct Answer	Reject	Mark
Number			
1(a)(i)	C Western African	All other	(1)
		answers	

Question Number	Correct Answer	Reject	Mark
1(a) (ii)	D Earthquake	All other answers	(1)

Question Number	Correct Answer	Mark
1 (b)	1 mark for describing the difference. 2nd mark awarded for extending statements such as an example	(2)
	of either primary and secondary impact.	(1+1)
	Primary are the first effects whilst secondary occur later (1) (1) valid example of either primary and secondary impact (1)	
	If student 'Outlines the difference' only by offering examples (no idea if timing/sequence, then both must be correct)	
	Might suggest that primary impacts cause fewer/more deaths and injuries than secondary (1) example of same difference (1)	
	Max 1 mark if only examples without any 'difference'	

Question Number	Correct Answer	Mark
1(c)	There are a wide range of responses that can be examined which depend on chosen example. They are likely to include: Local/National: Soldiers/volunteers sent (1) to dig for survivors (1) data to support –e.g. 50,000 in Sichuan (1) Helicopters used to reach isolated areas (1) to transport lifting gear and bring the injured out or similar development (1) People donating money for aid (1) data to support e.g. \$1.5 billion for Sichuan (1) International: Countries sent money (1) data to support e.g. UK \$2 million to Sichuan (1) Rescue teams flew in from abroad (1) e.g. Russians to Sichuan (1) Accept any other appropriate response e.g. Some candidates might offer an evaluative view of the 'immediate responses' as in 'it was very good' or 'it was very poor' and them explain why/describe how. Maximum of 3 marks if no named tectonic event.	(4) (1+1) + (1+1) Or (1+1+1) +1 Or 1+1+1+ 1

Question Number	Correct Answer	Mark
1(d)	1 mark for each appropriate statement. Additional mark(s) awarded for extending statements. At conservative boundaries plates slide past each other or slide in the same direction but at different rates (1), friction occurs (1) resulting in a build-up of pressure (1) the release of the pressure results in an earthquake (1) detail of epicentre /focus (1) an example is the San Andreas fault or any acceptable alternative (1) Allow maximum of 1 mark for origin of plate movements e.g. convection currents move the plates (1) Diagrams should be marked using the above points either as explicitly stated through annotations or implicit in the diagram itself. Accept any other appropriate response.	(4) 1+1+1+1 (1+1+1) +1 (1+1) + (1+1)

Question	Correct Answer	Reject	Mark
Number			
2(a)(i)	D 2000s	All other	(1)
		answers	

Question Number	Correct Answer	Reject	Mark
2(a)(ii)	C It advanced in the first few years and then retreated	All other answers	(1)

Question Number	Correct Answer	Mark
2(b)	 mark for identifying an appropriate piece of evidence (1) additional mark(s) awarded for extending statements (1) Common answers likely to focus on: Megafauna have disappeared (1) example of same (1) Little Ice Age (1) with ice fairs in London or equivalent idea to illustrate (1) Fossilised remains (1) of animals, plants or pollen that no longer live in that area (1) e.g. elephants in London (1). Landforms (1) like U shaped valleys left by retreating glaciers (1) in Scotland Ice-core samples from ice sheets (1) showing past levels of carbon dioxide (1) Allow up to 3 marks for any one piece of evidence developed with two extending points. Accept any other appropriate response. 	(4) (1+1) + (1+1) (1+1+1)+ (1)

Question Number	Correct Answer	Mark
2(c)	1 mark for each valid definition.1 mark for extension.	(2)
	Common answers likely to include:	1+1
	 The way gases in the atmosphere trap heat from the sun (1) example of gas e.g. carbon dioxide (1) The way gases in the atmosphere trap heat from the sun (1) increasing global/local temperatures as those gases increase (1) Accept any other appropriate response. 	

Question Number	Correct Answer	Mark
2(d)	Depends on chosen case-study but 1 mark for each valid statement – allow extension(s) to maximum of 3 for any one point. Common impacts are likely to include: • Loss of farmland (1) due to rising sea levels and/or salination (1) and so loss of income (1) local/located example of same (1)	(4) (1+1) + (1+1) Or (1+1+1) +1
	 Desertification (1) such as spread of the Sahara Desert (1) reducing farm output/increasing food insecurity (1) local/located example of same (1) Heatwaves (1) bringing illness/death (1) local/located example of same Spread of diseases (1) e.g. malaria (1) as they are able to breed (1) local/located example of same Drought and/or less and more unreliable rainfall (1) leading to crop failure (1) local/located example of same (1) Increased storminess (1) leading to flashfloods (1) local/located example of same (1) Possibility of growing different range of crops (1) longer thermal growing season/warmer summers (1) local/located example of same (1) Located examples have to be below national level e.g. a town/region etc. Limit to 3 marks if no country specific information 	(4)
	Accept any other appropriate response.	

Question Number	Correct Answer	Reject	Mark
3(a)(i)	C Asia	All other answers	(1)

Question Number	Correct Answer	Reject	Mark
3(a)(ii)	C 7 500	All other answers	(1)

Question Number	Correct Answer	Mark
3(a) (iii)	Identifies legitimate threat to species e.g. logging (1) which destroys habitat (1)	(2)
	Logging takes place because (1) land been cleared for ranching (1)	(1+1)
	Very diverse ecosystem (1) so many different species (1)	
	Accept any other appropriate response	

QuestionCorrect AnswerAcceptableMarkNumberanswer	
answer 3(b) 1 mark for each valid management measure at local/national level e.g. National Park (1) local forest reserves (1) footpath management (1) allow marine management schemes e.g. Lamlash Bay (1) allow local management of extreme environment (1) Guided to 'one location' but if location is national allow variety within that location. Additional mark(s) awarded for developing statements as in the following examples • Selective logging (1) so some tree cover is maintained (1) maintaining biodiversity (1) • Multiple zoning (1) for hunting, tourism and conservation (1) allowing co-existence of different groups (1) • Tree cover in watersheds (1) reducing flood risk (1) improving quality and quantity of water (1) • Agroforestry (1) maintaining biodiversity of agricultural land (1) ensuring long-term sustainability (1) Full marks can be awarded for one 'measure' identified with 3 marks for extended details of that scheme as below; • Wild boar reintroduced (1) who break up the soil searching for food (1) which maintains soil fertility (1) which helps prevent soil erosion (1) Accept any other appropriate response.	

Question Number	Correct Answer	Mark
3(c)	1 mark each for identifying a legitimate impact of altitude. Additional mark(s) awarded for extending statements. Temperatures decrease with height (1) approx. 1 degree per 100 m (1) example to support e.g. alpine at height and/or place as in 'snows of Kilimanjaro' (1) Rainfall changes with altitude (allow rain-shadow effect) (1) which will impact on biome development because plant growth affected by water supply (1) e.g. temperate forest in Bolivia (1) Soil depth/development may be affected (1) by climate and/or topography/slope (1) Accept any other appropriate response but limit to 2 marks if just a list of changes.	(4) (1+1) + (1+1) (1+1+1) + (1)

Question Number	Correct Answer	Reject	Mark
4(a)(i)	A It increased and decreased but was lowest in 2011	All other answers	(1)

Question Number	Correct Answer	Reject	Mark
4(a)(ii)	A Higher risk of crop failure	All other answers	(1)

Question Number	Correct Answer	Mark
4(a)(iii)	Growing incomes (1) therefore more baths/showers etc. (1)	(2) (1+1)
	Industrialisation (1) which consumes large quantities of water e.g. manufacturing processes (1)	
	Population is rising (1) and so demand will rise for domestic consumption or any other appropriate impact (1)	
	Accept any other appropriate response.	

Question	Correct Answer	Mark
4(b)	Depends on chosen scheme but costs and benefits need to be covered to gain maximum marks. e.g. Three Gorges Dam If the T-G-S is chosen case-study the following might apply; Costs: • Loss of farmland and villages (1) 1350 villages and/or people having to migrate (1) • Relocation of people (1) 1.3 million people and/or separation form families/cultural roots (1) • High economic cost (1) \$26 billion and/or maybe short-term solution because of siltation (1) • Increased eutrophication (1) and so reduced water quality thus health and/or economic damage (1) Benefits: • Produces electricity (1) 80 billion kWh p.a. (1) • Prevents flooding (1) so less economic damage/lower losses idea (1) • Recreational use (1) for increasingly prosperous Chinese population and/or tourists (1) • Habitat for water birds (1) so more ecological diversity • Cleaner water (1) therefore less disease (1)	(4) (1+1) + (1+1) Or (1+1+1) + 1
	Allow downstream impacts	
	If no named scheme cap at 3 marks	
	Accept any other appropriate response	
	NB: No management scheme identified – max 3.	

Question Number	Correct Answer	Mark
4(c)	Identifying an appropriate threat (1) Additional mark awarded for an extending statement/example (1) Responses likely to include: • Contaminated water supplies from domestic waste e.g sewage(1) leading to waterborne diseases (1) such as cholera (1) • Contaminated water from agricultural run-off (1) leading to high levels of nitrates in water (1) which can cause eutrophication (1) • water from industrial waste (1) leading to high levels of heavy metals e.g. lead/mercury (1) Allow impact on quality of ocean/sea water as in impact on water quality of, for example, siltation, sewage disposal etc.	(4) (1+1) + (1+1) (1+1+1) +1
	Accept any other appropriate response e.g. poor maintenance of the infrastructure.	

Question Number	Correct Answer	Reject	Mark
5(a)(i)	D Slumping	All other answers	(1)

Queston Number	Correct Answer	Reject	Mark
5(a) (ii)	B A period of heavy rain and stormy seas	All other answers	(1)
	Storing Seas	answers	

Question Number	Correct Answer	Reject	Mark
5(b)	1 mark for each valid method with 2 nd mark for extension through development of how it works or detail of what it is.	Responses referring to hard engineering	1+1
	Example – Beach replenishment (1) adds more sand to a beach which absorbs energy and/or protects the coast from erosion (1) Accept any other appropriate response.		

Question Number	Correct Answer	Mark
5(c)	 1 mark for identifying each valid difference. C - Strong swash. D - Strong backwash (1) C - Deposits. D- erodes (1) C - Gentle beach profile D - steep beach profile C(1) D - taller/higher - smaller/lower C (1) D - shorter wavelength/closer together D - longer wavelength etc C (1) D - plunging C - spilling Accept any other appropriate response.	(2) 1+1

Question	Indicat	cive content	
Number	CI '	Company of the state of the sta	
*5(d) QWC i-ii-iii	Stack formation explained using diagram and/or written explanation.		
	They form where a large crack/fault line/bedding plane in the headland is eroded by hydraulic action and abrasion with weathering and mass movement processes also contributing to the enlargement of the fissure. The crack grows into a cave. By the process of erosion and mass movement/weathering the cave becomes larger and eventually breaks through the headland, forming a natural arch. The arch is eroded and rockfall/weathering contribute to its enlargement which eventually collapses leaving a tall rock stack.		
Level	Mark	Descriptor	
Level 0	0	No acceptable response.	
Level 1	1-2	Simple descriptive points about one element of the process, probably erosion turning cave into arch. Sequencing not evident and range of processes limited. Geographical vocabulary sketchy.	
Level 2	3-4	Simple description of formation although incomplete. Some limited development or sequence with cave, arch, stack sequence clear. Marine erosion described and linked to formation. Limited structure to answer, Some clear uses of geographical terminology.	
Level 3	5-6	Good description of formation. Some explanation of link between processes and results with sequence given. Has detail of processes and may include role of rock structure and/or weathering. Some structure, clearly communicated with good range of geographical terms.	
SPaG Level 0	0	Errors severely hinder the meaning of the response or candidate does not spell, punctuate or use the rules of grammar within the context of the demands of the question.	
SPaG Level 1	1	Threshold performance Candidate spells, punctuates and uses the 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.	
SPaG Level 2	2	Intermediate performance Candidate spells, punctuates and uses the 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.	

SPaG Level 3	3	High performance Candidate spells, punctuates and uses the 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.
-----------------	---	--

Question Number	Correct Answer	Reject	Mark
6(a)(i)	A Hydraulic action	All other answers	(1)

Question Number	Correct Answer	Reject	Mark
6(a)(ii)	B A period of heavy rain and high discharge	All other answers	(1)

Question Number	Correct Answer	Reject	Mark
6(b)	1 mark for each valid method with 2 nd mark for extension through development of how it works or detail of what it is.	Responses referring to hard engineering	1+1
	Example – Wetland restoration (1) which creates a store for floodwater which reduces river discharge by allowing rivers to flood in areas where damage is minimal (1)		
	Accept any other appropriate response.		

Question Number	Correct Answer	Mark
6(c)	 1 mark for each valid difference U = steeper L = more gentle gradient U = narrow L = wider U = shallow L = deeper U = larger sediment/rocky bed etc. L = finer sediment U = slower flowing L = faster flowing 	(2) 1+1
	Accept any other reasonable comparison.	

Question Number	Indicative	e content				
*6(d) QWC i-ii-iii	Formation drawn res	n of a floodplain explanation may include written and /or sponse.				
	Floodplains are formed in the lower course of a river.					
	depos as the	The basic cause is meandering which spreads point bar deposits across the valley floor which is progressively widened as the meanders wander from side to wide thus creating river cliffs which ultimately collapse/retreat.				
		flooding spreads alluvium over this widening valley floor odplains are composed of two layers of material.				
	Diagram below	might show river cliffs, meanders, point bar deposits as				
		The floodplain, the wide flatter valley floor surrounding the river The river's LATERAL erosion as it meanders helps create the floodplain				
	Smaller sediment is carried further away and then deposited close to the deposited close energy to lose energy During a flood the floodplain is INUNDATED					
		This creates LEVEES or large natural embankments close to the channel Layers of sediment cover the flooplain				
Level	Mark	Descriptor				
Level 0	0	No acceptable response.				
Level 1	1-2	Simple descriptive points about nature of floodplains e.g. flat land. Process is probably a statement about river flooding. Sequencing not evident and processes may be stated e.g. 'deposition' but not explored. Geographical vocabulary sketchy.				
Level 2	3-4	Simple description of formation although incomplete. Limited development or sequence of results of flooding described with at least one explanatory link to reasons for deposition e.g. water slowing down. Limited structure to answer. Some clear uses of geographical terminology.				

Level 3	5-6	Good description of formation. Some explanation of link between processes and results with sequence given. Has detail of processes e.g point bar deposits or equivalent and may include role of river meandering. Some structure, clearly communicated with good use of geographical terms.
SPaG Level 0	0	Errors severely hinder the meaning of the response or candidate does not spell, punctuate or use the rules of grammar within the context of the demands of the question.
SPaG Level 1	1	Threshold performance Candidate spells, punctuates and uses the 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.
SPaG Level 2	2	Intermediate performance Candidate spells, punctuates and uses the 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.
SPaG Level 3	3	High performance Candidate spells, punctuates and uses the 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.

Question Number	Correct Answer	Reject	Mark
7(a) (i)	A plastic	All other answers	(1)

Question Number	Correct Answer	Reject	Mark
7(a) (ii)	B tourism	All other answers	(1)

Question Number	Correct Answer	Mark
7(b)	1 mark for identifying each valid impact of coastal development	(2)
	Common responses likely to include:	(1+1)
	Building of tourist facilities which degrades coastal habitats (1) because of waste discharged into water (coral) and/or removal to access beaches (mangroves) (1)	
	Heavy demand for seafood reducing stocks (1) so destroying ecosystem of reefs (coral) (1)	
	Pollution of rivers and/or dams on rivers (1) changing downstream sediment (mangroves) (1)	
	Accept any other appropriate response.	

Question Number	Correct Answer	Mark		
7(c)	1 mark for basic idea/synonym of/for a cycle. Additional mark for developing the idea through recognition of living organisms involved			
	It is the reuse (or similar) of materials/nutrients (1) between plants/vegetation and animals (1)			
	Or			
	The transfer and storage of nutrients by living organisms (1) from their physical surroundings and back again (1)			
	Accept any other appropriate response.			

Question Number	Indicative content		
*7(d) QWC i-ii-iii	 Candidates could focus on a wide range of global actions, including: The Law of the Sea, established to prevent individual countries from taking more than their fair share of the ocean's resources. International Seabed Authority established to safeguard resources and environments. International laws ratified to prevent the dumping of radioactive waste into the sea. Global Marine Species Assessment is an internationally managed programme designed to study marine ecosystems. MARPOL – International convection for the prevention of pollution from ships. IWC – International Whaling Commission set up to protect whales. CITES – prevents the trade in endangered marine animals. RAMSAR – global effort to protect wetlands, including marine ecosystems such as mangrove swamps. 		
Level	If student focuses on local actions then limit to 3 marks Mark Descriptor		
Level 0	0	No acceptable response.	
Level 1	1-2	An appropriate global action has been identified either by name or by description of action. Little, if any, development of their 'actions'. Limited structure to answer, basic use of geographical terminology.	
Level 2	3-4	Global action identified with some detailed description of their 'actions'. Explanation asserted but without evidence to support. Some structure, clearly communicated but with limited use of geographical terms.	
Level 3	5-6	Two or more global actions have been accurately described. Good explanation linking global actions with ocean health using evidence. Clear structure, well communicated with mostly sound use of geographical terms.	
SPaG Level 0	0	Errors severely hinder the meaning of the response or candidate does not spell, punctuate or use the rules of grammar within the context of the demands of the question.	

SPaG Level 1	1	Threshold performance Candidate spells, punctuates and uses the 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.
SPaG Level 2	2	Intermediate performance Candidate spells, punctuates and uses the 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.
SPaG Level 3	3	High performance Candidate spells, punctuates and uses the 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.

Question Number	Correct Answer	Reject	Mark
8(a) (i)	C big ears	All other answers	(1)

Question Number	Correct Answer	Reject	Mark
8(a) (ii)	B climate change	All other answers	(1)

Question Number	Correct Answer	Reject	Mark
8(b)	1 mark for identifying each appropriate adaptation. A further nark for an extension/development Common responses likely to include:	Answers referring to adaptations not associated with either hot arid or polar regions.	(2)
	 Polar – greenhouses (1) using ultraviolet lights and/or providing artificial heating (1) Hot Arid – irrigation (1) to help conserve water (1) 		
	 Polar – insulate buildings (1) using ripple glazing/reducing window size Hot Arid – small windows (1) to protect against daily heating (1) Accept any other legitimate adaptation 		

Question Number	Correct Answer	Mark
8(c)	The change from one biome (savanna) to another (desert) or similar idea (1) increasing aridity or similar example of change – lower biodiversity (1)	(2) (1+1)
	The spread of deserts (1) because of climate change (1)	

Question Number	Indicat	licative content		
*8(d) QWC	Global actions may include: Global climate change summits and agreements; 1997 - Kyoto Treaty Commitment to reduce greenhouse gas emissions by 2012 2009 - Copenhagen Accord 190 countries agreed to limit global warming. 2010 - Cancun Agreements Funds to help develop clean technology and developing countries cut emissions. 2011 - Durban Agreement 190 countries (including US and China) agree to legally binding emissions cutting targets. 2015 - Paris 195 countries signed an agreement within the United Nations Framework Convention on Climate Change (UNFCCC) dealing with greenhouse gas emissions mitigation, adaptation and finance starting in the year 2020			
i-ii-iii				
	or more specific to Extreme environments			
	Treaty - Restricted to the res	- Since 1994 it aimed to combat land degradation, reduce poverty and develop sustainable solutions Promotes 'bottom-up' solutions: local people get funding and advice eaty with rigorous otection 195 countries agreed to give money, share information and act together 195 countries agreed to give money, share information and act together.		
	If student focuses on local actions then limit to 3 marks Allow answers that focus on communities in extreme environments			
Level	Mark	Descriptor		
Level 0	0	No acceptable resp	oonse.	

Level 1	1-2	An appropriate global action has been identified either
		by name or by description of action. Little, if any, development of their 'actions'. Limited structure to answer, basic use of geographical terminology.
Level 2	3-4	Global action identified with some detailed description of their 'actions'. Explanation asserted but without evidence to support. Some structure, clearly communicated but with limited use of geographical terms.
Level 3	5-6	Two or more global actions have been accurately described. Good explanation linking global actions with the protection of extreme environments from climate change, using evidence. Clear structure, well communicated with mostly sound use of geographical terms.
SPaG Level 0	0	Errors severely hinder the meaning of the response or candidate does not spell, punctuate or use the rules of grammar within the context of the demands of the question.
SPaG Level 1	1	Threshold performance Candidate spells, punctuates and uses the 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.
SPaG Level 2	2	Intermediate performance Candidate spells, punctuates and uses the 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.
SPaG Level 3	3	High performance Candidate spells, punctuates and uses the 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.