National
Qualifications
2023

2023 Geography

Global Issues and Geographical Skills

Higher

Finalised Marking Instructions

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General marking principles for Higher Geography

Always apply these general principles. Use them in conjunction with the detailed marking instructions, which identify the key features required in candidates' responses.

(a) Always use positive marking. This means candidates accumulate marks for the demonstration of relevant skills, knowledge and understanding; marks are not deducted for errors or omissions.

(b) If a candidate response does not seem to be covered by either the principles or detailed marking instructions, and you are uncertain how to assess it, you must seek guidance from your team leader.

(c) Where the candidate does not comply with the rubric of the paper and answers two parts in one section, mark both responses and record the better mark.

(d) Marking must be consistent. Never make a hasty judgement on a response based on length, quality of handwriting or a confused start.

(e) Use the full range of marks available for each question.

(f) The detailed marking instructions are not an exhaustive list. Award marks for other relevant points.

(g) Award marks only where points relate to the question asked. Where candidates give points of knowledge without specifying the context, award marks unless it is clear that they do not refer to the context of the question.

(h) Award marks for knowledge/understanding where points are:
- relevant to the issue in the question
- developed (by providing additional detail, exemplification, reasons or evidence)
- used to respond to the demands of the question (e.g. evaluate, analyse).

Marking principles for each question type
There is a range of question types in this question paper. For each question type, the following provides an overview of marking principles, and an example.

Describe **questions**
Candidates gain marks for making relevant, factual points. These should be key points.
The points do not need to be in any particular order. Candidates may provide a number of straightforward points or a smaller number of developed points, or a combination of these. Candidates must provide more than an outline or list to gain marks. They could refer to, e.g., a landscape feature, a landscape formation process, a situation or facts demonstrating geographical knowledge.

Explain **questions**
Candidates gain marks for explaining or suggesting reasons for the cause or impact of something, or for referring to causal connections and relationships. Candidates must do more than describe to gain marks here.
- Where the question asks about a landscape feature, candidates should refer to the processes leading to landscape formation.
- For a source-based question, candidates should make use of these and refer to them within their answer for full marks.

Where candidates provide a purely descriptive answer, or one where development is limited, award no more than half the available marks for the question. Other questions look for candidates to demonstrate higher-order skills and will use command words such as analyse, evaluate, to what extent, and discuss.

***Analyse* questions**
Candidates gain marks for identifying parts, the relationship between them, and their relationships with the whole; and for drawing out and relating implications. Award an analysis mark where candidates use their knowledge and understanding or a source to identify relevant components (e.g. of an idea, theory, argument) and clearly show at least one of the following:

- links between different components
- links between component(s) and the whole
- links between component(s) and related concepts
- similarities and contradictions
- consistency and inconsistency
- different views or interpretations
- possible consequences or implications
- the relative importance of components
- understanding of underlying order or structure.

Where candidates are asked to analyse they should identify parts of a topic or issue and refer to the interrelationships between, or impacts of, various factors. E.g., where a question asks for an analysis of the soil-forming properties which lead to the formation of a gley soil, candidates should refer to how the various soil formatting properties contributed to its formation.

***Evaluate* questions**
Candidates gain marks for making a judgement of the success, failure, or impact of something based on criteria. They should give a brief description of the strategy or project being evaluated, before offering an evidenced conclusion.

***Account for* questions**
Candidates gain marks for giving reasons which are often (but not exclusively) from a resource, e.g.: for a change in trade figures; a need for water management; or differences in development between contrasting developing countries.

***Discuss* questions**
Candidates gain marks for exploring ideas about a project, or the impact of a change. They should consider different views on an issue or argument. This might not be a balanced argument, but they should give a range of impacts or ideas within their answer.

***To what extent* questions**
Candidates gain marks for considering the impact of a management strategy or strategies they have explored. They should give a brief description of the strategy or project being evaluated, before offering an evidenced conclusion. They do not need to offer an overall opinion based on a variety of strategies, but should assess each separately.

Marking instructions for each question

Section 1 — Global Issues

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
1.	(a)		**Award 1 mark** for each explanation; this may include interpreting data from the resources.	**10**	**Points may include:** • predicted population in 2050 of 40 million people is double the total in 2020. **(1 mark)** Increase would require additional water for domestic use **(1 mark)** • more than three quarters of the workforce depend on agriculture and can now grow crops during the dry months **(1 mark)** and irrigation is required for crop production throughout the year **(1 mark).** This would also allow increased crop production for export **(1 mark)** • there is a lack of rainfall from November to March which increases the need for water to be stored **(1 mark).** High temperatures throughout the year means high evaporation rates **(1 mark)** • the irregular/seasonal flow of the Niger **(1 mark)** can be managed to reduce the threat of flooding **(1 mark)** and to also allow for year-round navigation **(1 mark).** • HEP will help to meet the increasing energy demands of the country **(1 mark).** Excess energy produced could be exported to neighbouring countries **(1 mark)** • because only 39% of the population have access to improved sanitation, an increase in this provision will result in less being at risk from water related diseases **(1 mark)** and a healthier, more productive population, benefitting the economy **(1 mark).** **Or any other valid point.**

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
	(b)		Answers must discuss the possible negative impacts. Both socio-economic and environmental factors need to be mentioned to gain full marks. Award **1 mark** for each point. Award **a maximum of 8 marks** if the answer is vague/does not relate to a specific named water management project. Award up to **1 mark** for a specific named example.	**10**	**For the Tarbela Dam on the Indus river, Pakistan, answers may include:** • river and irrigation water becomes more saline with high evaporation rates **(1 mark)** resulting in farmers downstream having to switch to more salt-tolerant crops **(1 mark)** • the sediments which were transported to the river mouth forming a delta are now trapped behind the dam **(1 mark)** and dam capacity has been reduced by 30% as a result of sedimentation **(1 mark)** • the lack of flooding and subsequent lack of silt deposition has led to a need for chemical fertilisers **(1 mark)** which has resulted in high levels of Nitrogen and Phosphorous being washed into rivers **(1 mark)** • the decrease in storage may also reduce the volume of electricity being produced **(1 mark)** • the building of the dam and its reservoir caused the displacement of 96 000 **(1 mark)** people resulting in compensation having to be paid **(1 mark)** • despite irrigation crop yields did not reach expected levels **(1 mark)** and wheat had to be imported **(1 mark)** • the actual cost of Tarbela dam, most of which was borrowed from external sources **(1 mark)**, amounted to 23% of the increase in Pakistan's debt **(1 mark).** **Or any other valid point.**

Question			General marking principle for this type of question	Max mark	Specific Marking Instructions for this question
2.	(a)		Award **1 mark** for each valid point.	**6**	**Points may include:** • high percentage of a family's income may be spent on doctors' visits/drugs **(1 mark)** • this reduces the amount of money which can be spend on food/education **(1 mark)** • breeding season of mosquitoes coincides with harvesting time **(1 mark)** if families can't harvest crops, this leads to malnutrition **(1 mark).** • high proportion of nation's GDP is spent on combatting disease leaving less to spend on improving infrastructure **(1 mark)** • high levels of absenteeism from school leads to lower literacy rates **(1 mark)** and this can lead to a less skilled workforce in the future **(1 mark)** • tourists may avoid the area reducing revenue from visitors **(1 mark)** • foreign companies may not invest in the area due to an unreliable workforce **(1 mark).** **Or any other valid point.**

Question			General marking principle for this type of question	Max mark	Specific Marking Instructions for this question
	(b)		Award **1 mark** for each description of a strategy. Award **1 mark** for each evaluative point. Award a **maximum of 8 marks** for either part (i) or part (ii). Candidate may discuss malaria in this question however only strategies which could be considered PHC should be credited. Award up to **2 marks** where candidates give appropriate named examples which develop the answer. **A minimum of 2** strategies must be discussed for full marks. Award **a maximum of 8 marks** for any one strategy.	**14**	**Possible answers might include:** • **Oral Rehydration Therapy** is the mixture of salt and sugar with clean water **(1 A mark)** it is very effective as it is cheap for low-income countries **(1 B mark)** and it can be administered by untrained staff **(1 A mark).** The WHO estimates 1 million babies' lives are saved each year from this **(1 B mark)** • **vaccination programmes** for preventable diseases / diseases like Polio **(1 A mark)** run by UNICEF **(1 EG mark)** were delivered to rural areas as people here find it more difficult to access healthcare **(1 A mark)**. By 2018 polio was endemic in only 2 countries **(1 B mark)** • **charities** such as Water Aid **(1 EG mark)** improve water and sanitation by installing facilities such as pit latrines **(1 A mark).** The number of people without access to improved drinking water had decreased **(1 B mark)**, and the ash compost from latrines can improve crop yield so reduces malnutrition **(1 B mark)** • **barefoot Doctors** provide health education and administer basic first aid **(1 A mark)** they can then refer people to local health care centres/hospitals if needed **(1 A mark)**. This is suitable for developing countries as many rural people find it hard to travel to the hospitals which can be many days walk away **(1 b mark)** this takes pressure off the busy hospitals **(1 B mark)** and can treat illnesses earlier before they become more serious **(1 B mark)** Barefoot doctors also educate through play and songs **(1 A mark)** suitable as some people are illiterate in low-income countries **(1 B mark)** • **insecticide treated bed nets** provide a physical barrier against the mosquito. **(1 A mark)** However, they need to be treated regularly to be effective **(1 B mark)** and in some cases are used as fishing nets so washes off insecticide **(1 B mark)** • **Play Pumps International (1 EG mark)** provide roundabouts which extract ground water **(1 A mark)** and having only two moving parts use an appropriate level of technology **(1 B mark)** **Or any other valid point.**

Question			General marking principle for this type of question	Max mark	Specific Marking Instructions for this question
3.	(a)		Award **1 mark** for each valid point. Markers should take care not to credit human causes of climate change.	**8**	**Points may include:** • Milankovitch's theory: changes in the earth's orbit/tilt **(1 mark)** alter the amount of energy reaching the Earth **(1 mark)** • every 41,000 years, there is a change in the tilt of the Earth's axis **(1 mark).** A greater tilt means more sunlight in polar regions (**1 mark**) and over a 97,000-year cycle, the Earth's orbit stretches **(1 mark)** • global temperatures can be raised by peaks of sunspot activity **(1 mark),** which follow an 11-year pattern **(1 mark)** • after volcanic eruptions, large amounts of dust and droplets of sulphur **(1 mark)** may absorb and reflect the sun's rays lowering temperature **(1 mark)** • retreating ice caps release additional fresh water **(1 mark**) leading to changes in oceanic circulation **(1 mark).** This also reduces the albedo effect **(1 mark)** as reflection has decreased as more land is exposed **(1 mark).** Methane is being released from melting permafrost **(1 mark).** **Or any other valid point.**

Question			General marking principle for this type of question	Max mark	Specific Marking Instructions for this question
	(b)		**Award 1 mark** for each strategy used to control climate change. Award further marks for development of each strategy. Award a **maximum of 8 marks** for part (i) or (ii) Award **2 marks** where candidates give specific, appropriate named examples which further develop the answer.	**12**	**Possible answers may include:** • the government encourages households to reduce, reuse and recycle products so that less refuse is sent to landfill sites (**1 A mark**). This will reduce the amount of methane entering the atmosphere (**1 A mark**) • households could reduce energy consumption by insulating their homes / switching lights off (**1 A mark**) • all new buildings in Scotland have to have low carbon heating systems after 2024 (**1 A mark)** • people could also be encouraged to use public transport, walk or cycle, **(1 A mark)** or use hybrid or electric cars to cut down on fossil fuel consumption **(1 A mark),** however these are often too expensive for to purchase **(1 B mark)** • disposal of older fridges should be managed carefully to ensure CFC gases don't escape **(1 A mark)**, however there are still a lot in low-income countries which could lead to an issue in the future **(1 B mark)** • Government Policies such as 'Helping Households to cut their Energy Bills' **(1 EG mark)** encouraged the use of smart meters improving energy efficiency **(1 A mark).** However, the deadline has been moved to 2025 as the technology was not ready **(1 B mark)** • increasing the use of low carbon technologies such as windfarms (**1 A mark)** – the UK Government is committed to creating 20% of energy by renewable sources **(1 A mark).** In 2020 97% of Scotland's electricity demand was met by renewables **(1 B mark)** • the Paris Agreement **(1 EG mark)** outlined agreements between leaders of developed and developing countries to limit climate change to below a 2ºC rise **(1 A mark)** • to prepare for extreme weather events such as flooding **(1 A mark)** defences could be built to hold back flood water **(1 A mark).** For example, the Thames Flood Barrier **(1 EG mark)** is a series of gates which can be raised across the river to prevent sea water flooding London **(1 A mark).** This has successfully protected London from flooding on numerous occasions **(1 B mark).** However, a second barrier may be needed to cope with flooding beyond 2070 **(1 B mark)**

Question			General marking principle for this type of question	Max mark	Specific Marking Instructions for this question
					• the UK has implemented hosepipe bans to reduce water usage in drought periods **(1 A mark)** but these are unpopular and difficult to enforce **(1 B mark)** • a desalination plant has been built in London to provide additional fresh water in periods of drought **(1 A mark).** This uses 100% renewable energy to operate. **(1 A mark).** However, some feel the money should have been invested in reducing water wastage. **(1 B mark)** **Or any other valid point.**

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
4.	(a)		Award **1 mark** for each valid reason.	**8**	**Possible answers might include:** • Qatar generates all its electricity from oil as it has massive reserves **(1 mark)** infrastructure for oil extraction is already in place **(1 mark)**. • Canada has the largest amount of Hydroelectric Power because it has large amounts of precipitation **(1 mark)** and fast flowing major rivers that can be harnessed. **(1 mark).** Mountainous regions provide steep slopes to generate power **(1 mark)** • Kenya lies partly in an area of tectonic weakness **(1 mark)** where steam from reservoirs of hot water found a few miles or more below the earth's surface is harnessed to generate geothermal electricity **(1 mark).** • France has limited fossil fuel reserves and have invested in nuclear energy as a result **(1 mark)** as a peaceful stable country it is feels safe to have nuclear power stations **(1 mark)** • nuclear power allows energy to be produced as and when required **(1 mark).** • having a secure energy supply is important for European countries due to concerns about the reliability and security of importing natural gas from Russia **(2 marks)** • Italy is closer to the Equator **(1 mark)** and is under the influence of high pressure for much of the year **(1 mark)**, giving clear skies and long hours of sunshine making it ideal for solar power generation **(1 mark)** • Scotland has a large coastline which allows for an uninterrupted wind flow **(1 mark).** Scotland is also a wealthy country which means it can invest in more expensive wind turbines **(1 mark).** Scotland frequently experiences low pressure **(1 mark)** and associated winds sufficient to generate wind power, especially over exposed uplands **(1 mark).** **Or any other valid point.**

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
	(b)		Award **1 mark** for each point on effectiveness. Candidates must discuss a renewable source of energy. Award **no marks** for non-renewable sources of energy. Award **2 marks** for specific, appropriate named examples which further develop the answer.	**12**	**Possible answers for all renewable energy sources might include:** • infinite energy resources/sources of power that are sustainable/cannot run out **(1 mark)** • independent production of energy reducing the need for reliance on imports of fuel **(1 mark).** **For tidal power, other possible answers could include:** • potential in countries such as Scotland, with a windy climate and exposed coastline **(1 mark),** for example the Pentland Firth **(1 EG mark)** to generate 50% of all electricity needs **(1 mark)** • more predictable and reliable than wind power **(1 mark)** • turbine rotors can turn 180 degrees, to harness power from tides as they move in and out **(1 mark)** • more efficient (80%) at low speeds in converting water into electricity than wind power **(1 mark),** as water is 1000 times denser than air **(1 mark)** • where surplus is generated, it can be stored **(1 mark)** and sold for profit **(1 mark)** • tidal energy is an expensive form of energy production **(1 mark)** • despite working on tidal turbine technology in Orkney, this is not yet sufficiently advanced to allow for large scale production **(1 mark)** • often found in locations far from areas of high demand **(1 mark)** • limited energy potential — powerful tides only occur 10 hours in a day. **(1 mark)** **Or any other valid point.**

Section 2 — Application of Geographical Skills

Question			General marking principle for this type of question	Max Mark	Specific Marking Instructions for this question
5.			Candidates should make reference to all sources, including the Ordnance Survey map, when discussing the suitability of the site and the social, economic and environmental impacts of the development on the surrounding area. Award **1 mark** for each description of the site, or explanation of suitability of the site. Award **1 mark** for each impact, and award a further mark where the candidate develops this. Award **1 mark** where candidates refer to the resource and award further marks where the candidate explains its suitability (beyond the wording of the resource). Award up to **4 marks** for map evidence (EG), which may include correct and appropriate grid references and/or place/road names. It is possible that some points referred to as a disadvantage will be interpreted by other candidates as a negative impact. Award marks for each point only once, where it is best explained.	**20**	**Possible advantages of this location may include:** • area chosen is flat **(1 mark)** and would help keep constructions costs down **(1 mark)** • the area chosen is close to main roads which makes it easier for construction lorries/future residents **(1 mark)** • the area chosen has good accessibility which means fewer access roads need to be built **(1 mark)** • there is potential for further developments to the NE of the site **(1 mark)** • this is a brownfield site therefore environmental impact is minimised **(1 mark).** **Possible disadvantages:** • the proposed site will cross the existing road **(1 mark)** meaning additional road management strategies will be required **(1 mark)** • existing farms such as Grange Farm 965896 **(1 EG mark)** may need to be compensated increasing costs **(1 mark)** • local residents in Deenethorpe **(1 EG mark)** may also suffer from noise pollution during the construction phase **(1 mark)** • a small part of Weldon Little Wood 949914 **(1 EG mark)** will be cleared to make room for the new housing development **(1 mark).** **Positive Impacts:** • the site is located close to a number of transport links to Corby which will allow for commuting **(1 mark)** • the creation of new electric bus shuttle service will potentially help ease the impact of congestion on roads in the area **(1 mark)** • construction jobs will be created **(1 mark**) in addition to service jobs, for example, in the new school/hotel (**1 mark**) • the mixed tenure means there will be a greater social mix in the area (**1 mark**) • new public paths and cycle routes will provide opportunities for leisure activities for local residents (**1 mark**)

Question			General marking principle for this type of question	Max Mark	Specific Marking Instructions for this question
					• the housing development will bring more customers who will spend money **(1 mark)** in services in for example Weldon (**1 EG mark**) • farmers could sell produce to the new hotel increasing income **(1 mark)** • most of the energy will come from environmentally friendly options so limiting greenhouse gas emissions (**1 mark)** • the increase in houses will help relieve pressure on the local housing market **(1 mark**) as the population in the area is predicted to increase from 73,000 to 117,000 between 2020 and 2040 **(1 mark).** **Negative Impacts:** • construction work and the various activities could be very damaging to the natural environment **(1 mark)** and could face strong opposition from conservationists **(1 mark)** • runoff during construction may contain pollutants, which could harm the local biodiversity **(1 mark)** • noise pollution from increased traffic activity would upset local residents **(1 mark)** with an increase of 200 vehicles per hour on the A427 **(1 mark)** • road congestion in the surrounding areas will increase **(1 mark)** due to lorries during construction **(1 mark)** and commuters from the new houses **(1 mark)** • money will need to be made available to compensate farmers to sell their land **(1 mark)** • flooding could increase due to less infiltration **(1 mark)** as farmland is being changed to impermeable surfaces **(1 mark).** **Or any other valid point.**

[END OF MARKING INSTRUCTION]