



National
Qualifications
2024

2024 Geography

Global Issues and Geographical Skills

Higher

Question Paper 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 (eg, 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) | <p>Award 1 mark for each descriptive factor.</p> <p>Award 1 mark for each explanation.</p> <p>Award a maximum of 5 marks for descriptive points.</p> <p>Do not award marks for human factors. Although there could be overlap with factors like cost, this must be clearly linked to the physical environment.</p> <p>Avoid repetition of explanation points, eg increased costs.</p> | 8 | <p>Possible responses could include:</p> <ul style="list-style-type: none"> • narrow and deep valleys (1 a mark), means lower costs for construction materials (1 b mark) • this mean they have a reduced surface area meaning less water is lost to evaporation (1 b mark) combined with low temperatures (1 a mark) • if the site has impermeable rock (1 a mark) this would reduce water loss from the reservoir by percolation (1 b mark) • a geologically stable area away from earthquake zones/fault lines (1 a mark) will reduce the risk of damage or failure of the dam (1 b mark) • a high drainage density (1 a mark) or high rainfall (1 a mark) will ensure that the reservoir will receive enough water to avoid transfer from adjacent drainage basins (1 b mark). <p>Or any other valid point.</p> |

| Question | General marking principle for this type of question | Max mark | Specific marking instructions for this question |
|----------|---|----------|---|
| (b) | <p>Answers must discuss the possible positive impacts.</p> <p>Both socio-economic and environmental factors need to be mentioned to gain full marks.</p> <p>1 mark should be awarded for a developed explanation, or a more straightforward impact linked to the case study.</p> <p>Award a maximum of 9 marks if the answer is vague/does not relate to a specific named water management project.</p> <p>Award up to 2 marks where candidates give specific named examples within the case study area, which develop the answer.</p> | 12 | <p>For the Aswan Dam, answers may include:</p> <ul style="list-style-type: none"> • increased access to clean drinking water reduces water borne diseases such as typhoid (1 mark) • the stored water can be released during dry seasons for irrigation purposes (1 mark) • this increased irrigation, which allows for two crops a year to be grown (1 mark), this reduces food shortages and malnutrition (1 mark) • the production of wheat and sugar cane tripled (1 mark) allowing more export crops to be produced (1 mark) • new industries reduce unemployment in the area (1 mark) • the new reservoir has allowed the introduction of new species (1 mark) such as the Nile perch (1 EG mark) into Lake Nasser (1 EG mark). This has increased the income from commercial fishing industry and fishing tourism industry (1 mark) • industries which require large amounts of water have grown up near to Aswan, eg fertilisers (1mark), which creates jobs and generated foreign income (1 mark) • Lake Nasser provides a sanctuary for waterfowl and wading birds (1 mark) which has increased biodiversity in the area (1 mark) • the hydro plant has increased green/clean energy in the area (1 mark) instead of using polluting fossil fuels reducing emissions which contribute to climate change (1 mark) • flood control has been greatly improved (1 mark) meaning less risk to fertile farmland on the floodplain (1 mark) • the river flow is more uniform meaning the river can be navigated by an increased number of vessels (1 mark). This has also increased tourism in the form of cruise ships (1 mark). <p>Or any other valid point.</p> |

| Question | | General marking principle for this type of question | Max mark | Specific marking Instructions for this question |
|----------|-----|--|----------|--|
| 2. | (a) | <p>Award 1 mark for each valid description.</p> <p>Award a maximum of 6 marks for either physical or human causes.</p> | 8 | <p>Possible answers might include:</p> <p>Physical Causes:</p> <ul style="list-style-type: none"> • temperatures must be between 15-40 °C (1 mark) • at least 60% humidity (1 mark) • female anopheles mosquito must be present to spread malaria (1 mark) • transferring the plasmodium parasite (1 mark) • stagnant water is required for the mosquito to lay larvae (1 mark) • areas of vegetation or shade for the mosquitoes to digest blood (1 mark). <p>Human Causes:</p> <ul style="list-style-type: none"> • exposed skin allows mosquito to bite sleeping residents (1 mark) • traditional housing allows mosquitoes access with open vents or windows allowing mosquitoes to bite people whilst asleep (1 mark) • large population/high population density provides blood reservoir/supply for mosquitoes (1 mark) • air travel can contribute to the spread (1 mark) • open sewers / surface drainage can create areas of stagnant water (1 mark) • paddy fields where people work exposing them (1 mark) • high levels of poverty mean even the simplest prevention methods are unaffordable (1 mark) • a lack of education in some areas means people aren't aware of the transmission risk factors of malaria (1 mark) <p>Or any other valid point.</p> |

| Question | General marking principle for this type of question | Max mark | Specific marking Instructions for this question |
|----------|--|-----------|--|
| (b) | Award 1 mark for each explanation. Award up to 2 marks where candidates give appropriate named examples which develop the answer, with a maximum of 1 mark awarded for a named example of each strategy. | 12 | <p>Possible answers might include:</p> <ul style="list-style-type: none"> • one method used was to spray pesticides/insecticides on walls in homes in an attempt to kill the Anopheles mosquitoes (1 mark) eg DDT (1 EG mark) • breeding genetically modified sterile mosquitoes causes the species to die out (1 mark) • specially designed mosquito traps use CO₂ to mimic animals and humans (1 mark) • BTI bacteria artificially grown in coconuts (1 mark). The fermented coconuts are broken open after a few days and thrown into the mosquito larvae infested ponds (1 mark). The larvae eat the bacteria and have their stomach lining destroyed (1 mark). • putting larvae-eating fish into stagnant ponds or paddy fields (1 mark), such as the muddy loach (1 EG mark) • flushing reservoirs every seven days (1 mark) as it takes longer than this period of time for the larvae to develop into adult mosquitoes (1 mark) • planting eucalyptus trees can help soak up excess moisture to remove the breeding grounds (1 mark) • covering standing water and water storage cans, near to homes and villages to reduce breeding grounds (1 mark) eg the Oxfam bucket (1 EG mark) • medication to kill the parasite/prevent infection (1 mark) such as Quinine/Chloroquine/Lariam/Malarone (1 E mark) • medical trials have produced a safe vaccine (1 mark) such as RTS,S (Mosquirix), R21/Matrix-M (1 EG mark) • a new antibody treatment has been tested in Africa which provides protection from the disease for at least six months (1 mark) CIS43LS (1 EG mark). • educating people in the use of insect repellents (1 mark) or covering the skin at dawn/dusk (1 mark) when mosquitoes are most active, to reduce the chances of being bitten (1 mark) • the increased use of insecticide-coated mosquito nets at night (1 mark) eg the WHO's 'Roll Back Malaria' campaign (1 EG mark). <p>Or any other valid point.</p> |

| Question | | General marking principle for this type of question | Max mark | Specific marking Instructions for this question |
|----------|-----|---|----------|--|
| 3. | (a) | <p>Award 1 mark for an impact of climate change.</p> <p>Award further marks for development of each impact.</p> <p>Award a maximum of 2 marks where candidates give specific, appropriate named examples which further develop the answer.</p> | 12 | <p>Possible answers may include:</p> <ul style="list-style-type: none"> • sea level rises caused by thermal expansion of the oceans (1 mark) and by the melting of glaciers and land-based ice caps (1 mark) • low-lying coastal areas will suffer flooding (1 mark) eg Bangladesh (1 EG mark) leading to large-scale displacement of people (1 mark) and loss of land for farming and destruction of property (1 mark) • climate change refugees moving to higher ground or to other countries (1 mark) from areas such as Tuvalu or the Maldives (1 EG mark) will exert more pressure on resources such as housing, water and power supplies in the receiving area (1 mark) • there will be more extreme and more variable weather such as flooding and droughts (1 mark), and more frequent and intense hurricanes due to increased sea temperatures (1 mark) • there will be an increase in precipitation, particularly in the winter in northern countries (1 mark) increase in extent of tropical/vector borne diseases, as warmer areas expand (1 mark) • possibly up to 40 million more people in Africa being exposed to risk of contracting malaria (1 mark) • predicted extinction of some land species, due to habitat loss (1 mark) • an increase in sea temperature leads to coral reefs bleaching (1 mark). Coral expels the algae causing it to turn white (1 mark) • changes to ocean current circulation may mean the thermohaline circulation starts to lose impact on north-western Europe, resulting in considerably colder winters (2 marks) • a more frequent El Niño/La Niña (1 mark) leads to changes in the monsoon (1 mark) • a prolonged dry season can lead to forest fires (1 mark) eg Australian bushfires (1 EG mark). <p>Or any other valid point.</p> |

| Question | General marking principle for this type of question | Max mark | Specific marking Instructions for this question |
|----------|--|----------|--|
| (b) | <p>Award 1 mark for each description.</p> <p>Answers must relate to strategies used to reduce greenhouse gas emissions.</p> <p>Award up to 1 mark for specific, appropriate named examples which further develop the answer.</p> | 8 | <p>Possible answers may include:</p> <p>Recycling</p> <ul style="list-style-type: none"> • individuals can reduce, reuse and recycle products so that less refuse is sent to landfill sites where it releases methane (1 mark) • methane gas is captured at landfill sites and used for energy production (1 mark). <p>Heating Homes</p> <ul style="list-style-type: none"> • households could reduce energy consumption by better insulating their homes (1 mark) • new buildings in Scotland will use heating systems that produce zero direct emissions at the point of use (1 mark) • government policies encourage the use of smart meters improving energy efficiency (1 mark). <p>Transport</p> <ul style="list-style-type: none"> • cycle to work schemes are promoted and funded by local authorities and businesses to encourage sustainable transport (1 mark) • drivers are offered discounts on new hybrid or electric cars to cut down on carbon emissions (1 mark) • the Scottish government aims to ‘phase out’ new petrol and diesel cars by 2030/2035 (1 mark). <p>Electrical appliances</p> <ul style="list-style-type: none"> • refrigeration units are shredded in a controlled environment to extract CFC gases safely during disposal (1 mark) • new cooling units use Pentane instead of CFC’s/HFC’s (1 mark), which has a far lower GWP (Global Warming Potential) than CFC’s/HFC’s (1 mark). |

| Question | General marking principle for this type of question | Max mark | Specific marking Instructions for this question |
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| | | | <p>Energy Production</p> <ul style="list-style-type: none"> • increasing the use of low carbon technologies such as windfarms (1 mark), eg Beatrice/Seagreen wind farms (1 EG mark) • by 2030, Scotland aims for renewable energy generation to account for 50% of energy demand across electricity, heat and transport (1 mark). <p>International Agreements</p> <ul style="list-style-type: none"> • world leaders gather to discuss methods/targets to limit carbon emissions and cooperate to tackle the climate crisis (1 mark) • at COP 26 Glasgow (1 EG mark) there was an explicit plan to reduce use of coal responsible for 40% of annual CO2 emissions (1 mark) • the Paris Agreement (1 EG mark) provided financial support to lower income countries to develop low carbon technologies (1 mark). <p>Or any other valid responses.</p> |

| Question | | General marking principle for this type of question | Max mark | Specific marking instructions for this question |
|----------|-----|---|----------|--|
| 4. | (a) | Award 1 mark for each reason. | 8 | <p>Possible answers might include:</p> <ul style="list-style-type: none"> • most of the global economic growth is happening in middle and low-income countries (1 mark) • This has led to a growth of infrastructure eg roads, buildings (1 mark), requires energy-hungry materials such as concrete and steel (1 mark) • population growth is greater in developing countries (1 mark) • leading to increased demands for electricity for lighting and appliances (1 mark) • the populations of these countries are also getting more wealthy (1 mark) • driving consumer demand for more appliances such as fridges and TVs (1 mark) • however, these products tend to be less energy efficient when compared to the more expensive options in high-income countries (1 mark) • car ownership rates have also increased (1 mark) • this increases the use of petrol and diesel vehicles (1 mark) • much of the economic growth in developing countries is based on energy-hungry manufacturing industries (1 mark) • many manufactured products are sold to developed countries and therefore need to be transported (1 mark) • along with a large increase in passenger air travel (1 mark) which has led to the construction of a large number of airport terminals and airplanes use, particularly in Southeast Asia (1 mark) • concrete production for urbanisation uses huge amounts of energy (1 mark) • energy is required to produce fertilisers and pesticides (1 mark) due to increased food production (1 mark). <p>Or any other valid point.</p> |

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|----------|---|----------|--|
| (b) | <p>Award 1 mark for each point on effectiveness.</p> <p>Candidates must discuss non-renewable sources of energy.</p> <p>Award no marks for renewable sources of energy.</p> <p>Award a maximum of 2 marks where candidates give specific, appropriate named examples which further develop the answer.</p> | 12 | <p>Possible answers for all fossil fuels may include:</p> <ul style="list-style-type: none"> • non-renewable energy provides instant power, as required (1 mark) meeting demand at peak times, such as early evening (1 mark) <p>For nuclear energy answers may include:</p> <ul style="list-style-type: none"> • although uranium is a finite resource (1 mark), nuclear power can supply energy for hundreds or thousands of years (1 mark) • a small amount of radioactive material can produce considerable levels of energy (1 mark), eg a lump of uranium can produce 2 million times more energy than from a comparable lump of coal (1 mark) • nuclear power plants can be very reliable (1 mark), and can run without any interruption for up to 2 years (1 mark), not being affected by changing weather conditions, unlike, for example, wind power (1 mark) • does not give off atmospheric pollutants (1 mark) • can be highly toxic, with devastating and long-lasting consequences if there is a leak (1 mark), such as Chernobyl, Ukraine in 1986 (1 EG mark) • storing of nuclear waste is extremely expensive (1 mark) • security concerns, such as terrorist threat (1 mark) • for countries that are tectonically unstable there is a risk of radioactive leak (1 mark) • countries with low fossil fuel resources are not reliant on imports (1 mark). <p>For oil answers may include:</p> <ul style="list-style-type: none"> • oil is a finite resource (1 mark) and is relatively inexpensive as infrastructure is already in place (1 mark) • one of the most abundant energy sources (1 mark) • no new technology needed to use it, so relatively inexpensive (1 mark) • liquid form makes it easy to transport and store (1 mark) • most countries now have to limit their production of CO₂ to meet climate change commitments (1 mark), eg the Paris Agreement (1 EG mark) of the three major fossil fuels (oil, gas and coal), oil reserves are the lowest (1 mark), estimated at only 50 years left (1 mark) |

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|----------|---|----------|--|
| | | | <ul style="list-style-type: none"> • environmental protests can disrupt oil supply (1 mark) eg Just Stop Oil (1 EG mark) • extracting/transporting crude oil can potentially cause spills (1 mark), which can result in a temporary reduction in supplies (1 mark), eg explosion of BP Deepwater Horizon Gulf of Mexico 2010 (1 EG mark) • increased costs in exploring and extracting remaining oil reserves (1 mark), will result in higher domestic energy bills. (1 mark) • OPEC (1 EG mark) control the price of oil, pushing it up (1 mark) making it too expensive for lower to middle income to use (1 mark) <p>For ‘fracking’ answers may include:</p> <ul style="list-style-type: none"> • the shale gas provides an alternative energy source (1 mark) reducing reliance on traditional fossil fuels such as oil which are finite (1 mark) • noise and light pollution is increased due to 24-hour production on shale gas sites (1 mark) • in USA shale gas production has allowed it to become self-sufficient in gas (1 EG mark) and means it does not have to rely on imports from other countries (1 mark) • however, the fracking fluid used in the process could pollute ground water and enter the domestic water system (1 mark) • the fracking process could be linked to causing minor earthquakes and tremors in the local area (1 mark) leading to structural damage to buildings and infrastructure (1 mark) • requires large amounts of water, which reduces local fresh water supply (1 mark) • hard to dispose of flowback liquid which contains radioactive material and hydrocarbons (1 mark). This needs to be stored and then disposed of which increases the cost (1 mark) • shale gas releases 50% less CO² than coal (1 mark) • methane leaks out during the pumping and drilling process (1 mark) • many argue that research into fracking, diverts money and resources from research into renewable energy (1 mark) • fracking has been banned by many countries due to environmental concerns. (1 mark) <p>Or any other valid point.</p> |

Section 2 – Application of Geographical Skills

| Question | General marking principle for this type of question | Max mark | Specific marking Instructions for this question |
|----------|--|----------|--|
| 5. | <p>Award 1 mark for each description of the site, or explanation of suitability of the site.</p> <p>Award 1 mark for each impact and award a further mark where the candidate develops this.</p> <p>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).</p> <p>Award up to 4 marks for map evidence (EG), which may include correct and appropriate grid references and/or place/road names.</p> <p>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.</p> | 20 | <p>Suitability of the location:</p> <ul style="list-style-type: none"> • the site is on gently sloping/flat land (1 mark) so it will reduce the cost of the development (1 mark) • will attract homeowners to live here as it is on a scenic beachfront (1 mark) • there is access to the site for construction vehicles (1 mark) via the A4106 (1 ME mark) • this links to the M4 (1 ME mark) connecting commuters to the wider area (1 mark) • however, access to the site for large machinery may be difficult due to the surrounding built up area (1 mark). • there is no train station nearby for those without cars (1 mark), with the nearest station around 5km away (1 mark) • there is a long-distance path which goes past the development which could make it more attractive to buyers (1 mark), the Wales Coast path (1 ME mark). Although this could also put people off buying a house here as there could be lots of people walking past your home (1 mark) • there are also nature reserves nearby which will be attractive for families to visit (1 mark), for example, Meththyr mawr Warren (1 ME mark) • the site is next to a caravan holiday park so it may be noisy in the summer months when there are lots of tourists (1 mark) • the site is close to the sea so could suffer from storm damage/flooding (1 mark). To prevent this more expensive flood defences may need to be built (1 mark). Although the headland will protect the area from possible coastal flooding (1 mark). |

| Question | General marking principle for this type of question | Max mark | Specific marking Instructions for this question |
|----------|---|----------|--|
| | | | <p>Impacts:</p> <ul style="list-style-type: none"> • the development is also between the holiday park and the town centre so more people may use this as a route into town (1 mark), this could lead to more litter or noise (1 mark) • there is parking at (821768) (1 ME mark) which will reduce costs of the new development (1 mark), however, there may not be enough spaces for all the visitors (1 mark) • the pleasure park will be removed which may upset locals (1 mark) and it could reduce the appeal of the nearby holiday park (1 mark) • the construction vehicles will cause problems for the other locals with increase air/noise pollution/traffic congestion (1 mark) • the population growth of Porthcawl/Bridgend is higher than most of the surrounding areas (1 mark), this shows there is a need for more homes to be built (1 mark). The house prices have also increased (1 mark) from £220,000 to £245,000 in the last 4 years (1 mark) which also shows this should be a good investment for the developers (1 mark) This development may help to provide affordable housing in an area where prices are rising (1 mark) • unemployment is higher in Porthcawl (1 mark) at 3.6% compared to 3.2% in Bridgend (1 mark). Construction of the development will provide short-term jobs in the construction phase of the development (1 mark). Longer term jobs will be provided by the supermarket and amusements (1 mark). <p>Or any other valid point.</p> |

[END OF MARKING INSTRUCTION]