OXFORD AQA
INTERNATIONAL QUALIFICATIONS

INTERNATIONAL AS

GEOGRAPHY

GG01A

Paper 1A Physical Geography 1 Hot Desert Systems and Landscapes

Mark scheme

June 2025

Version: 0.1 Pre-Standardisation

256XGG01A/MS

Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same, correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this mark scheme are available from www.oxfordaqa.com

International AS Geography mark scheme

How to mark

Aims

When you are marking your allocation of scripts your main aims should be to:

- recognise and identify the achievements of students
- place students in the appropriate mark band and in the appropriate part of that mark band (high, low, middle) for **each** Assessment Objective
- record your judgements with brief notes, annotations and comments that are relevant to the mark scheme and make it clear to other examiners how you have arrived at the numerical mark awarded for each Assessment Objective
- ensure comparability of assessment for all students, regardless of question or examiner.

Approach

It is important to be **open-minded** and **positive** when marking scripts.

The specification recognises the variety of experiences and knowledge that students will have. It encourages them to study geography in a way that is relevant to them. The questions have been designed to give them opportunities to discuss what they have found out about geography. It is important to assess the quality of **what the student offers**.

Do not mark scripts based on the answer **you** would have written. The mark schemes have been composed to assess **quality of response** and not to identify expected items of knowledge.

Assessment Objectives

This component requires students to:

AO1	Demonstrate knowledge and understanding of places, environments, concepts, processes, interactions and change, at a variety of scales.
AO2	Apply knowledge and understanding in different contexts to interpret, analyse and evaluate geographical information and issues.
AO3	Use a variety of relevant quantitative, qualitative and fieldwork skills to: • investigate geographical questions and issues • interpret, analyse and evaluate data and evidence • construct arguments and draw conclusions.

The marking grids

Do not think of levels equaling grade boundaries.

Depending on the part of the examination, the levels will have different mark ranges assigned to them. This will reflect the different weighting of Assessment Objectives in particular tasks and across the examination as a whole.

Using the grids

Having familiarised yourself with the descriptors and indicative content, read through the answer and annotate it (as instructed below) to identify the qualities that are being looked for and that it shows. You can now check the levels and award a mark.

Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptors for that level. The descriptors for the level indicate the different qualities that might be seen in the student's answer for that level. If it meets all the descriptors for the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptors and the answer. With practice and familiarity you will find that for better answers you will be able to skip through the lower levels of the mark scheme quickly.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best-fit approach for defining the level and then use the variability of the response to help decide the mark within the level.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark.

It is often best to start in the middle of the level's mark range and then check and adjust. If there is a lot of indicative content fully identifiable in the work you need to give the highest mark in the level. If only some is identifiable or it is only partially fulfilled, then give the lower mark.

The exemplar materials used during standardisation will also help. There will be an answer in the standardising materials that will correspond with each level of the mark scheme. This answer will have been awarded a mark by the lead examiner. You can compare the student's answer with the example to determine if it is of the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the lead examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

In addition to the levels descriptors, question specific indicative content is provided as a guide for examiners. This is not intended to be exhaustive and you must credit other valid points.

An answer that contains nothing of relevance to the question must be awarded no marks.

Annotating scripts

You should write a summative comment at the end for each Assessment Objective and indicate the marks for each Assessment Objective being tested at the end of the answer in the margin in sequence. It is vital that the way you arrive at a mark should be recorded on the script. This will help you with making accurate judgements and it will help any subsequent markers to identify how you are thinking. Please do not write negative comments about students' work or their alleged aptitudes.

Section A – Living with Hazards **Total for this section: 40 marks**

Question	Part	Marking guidance	Total marks
01	1	**'Accepting that hazards are natural events that cannot be controlled' describes which human approach to hazards?** Key – B: Fatalism	**1** **AO1=1**

Question	Part	Marking guidance	Total marks
01	2	**What is liquefaction?** Key – C: Conversion of soil into a fluid-like mass during a seismic event.	**1** **AO1=1**

Question	Part	Marking guidance	Total marks
01	3	**Which of the following would lead to the formation of an ocean ridge?** Key – C: Two oceanic plates moving apart.	**1** **AO1=1**

Question	Part	Marking guidance	Total marks
01	4	**Which of the following describes a natural cause of a wildfire?** Key – D: Lightning setting fire to trees and grass.	**1** **AO1=1**

Question	Part	Marking guidance	Total marks
01	5	**Which of the following describes tropical storm frequency?** Key – C: The number of storms within a given time period.	**1** **AO1=1**

Question	Part	Marking guidance	Total marks
02		**Figure 1** shows natural hazard risks in the Philippines based on previous recorded events. **Analyse the data shown in FIGURE 1.**	**6** **AO3=6**

Level	Marks	Descriptor
2	**4–6**	**AO3** – Clear selection and analysis of the evidence that has been provided which makes appropriate use of data to support. Clear connections between different aspects of the data.
1	**1–3**	**AO3** – Some basic selection and analysis of the evidence that has been provided which makes limited use of data to support. Basic or limited connections between different aspects of the data.
0	**0**	No creditable content.

Indicative Content

AO3

- The Philippines is affected by a range of hazards.
- Some areas are affected by a greater number of hazards than other areas.
- There is a very high risk of earthquakes, tropical storms and floods.
- Earthquakes affect the largest area of the country, followed by tropical storms.
- The dark brown zone has the highest number of settlements affected by volcanoes, the light brown zone has no settlements affected by volcanoes.
- The strongest tropical storms affect the eastern coast, particularly in the north-east.
- The south/south-west has limited tropical storm risk.
- There is an earthquake risk throughout the country.
- The earthquake risk is high in most of the country according to the intensity scale.
- There are many settlements at risk of earthquakes.
- There are sixteen active volcanoes on land and a number in the surrounding ocean.
- Earthquakes appear to affect the largest proportion of land.
- Tropical storms have the largest area in the very high risk category.
- Earthquakes, tropical storms and floods are in the very high risk category.
- Storm surge is only a risk in approximately 5% of the land area.

Question	Part	Marking guidance	Total marks
03		**Explain why seismic hazards occur at conservative plate margins.** **AO1** – Knowledge and understanding of why seismic hazards occur at conservative plate margins. **AO2** – Applies knowledge and understanding to explain why seismic hazards occur at conservative plate margins.	**9** **AO1=4** **AO2=5**

Level	Marks	Descriptor
3	**7–9**	**AO1** – Demonstrates detailed knowledge and understanding of conservative plate boundaries. **AO2** – Applies detailed knowledge and understanding to explain why seismic hazards occur at conservative plate margins.
2	**4–6**	**AO1** – Demonstrates clear knowledge and understanding of conservative plate boundaries. **AO2** – Applies clear knowledge and understanding to explain why seismic hazards occur at conservative plate margins.
1	**1–3**	**AO1** – Demonstrates basic knowledge and understanding of conservative plate boundaries. **AO2** – Applies basic knowledge and understanding to explain why seismic hazards occur at conservative plate margins.
0	**0**	No creditable content.

Indicative Content

Knowledge and understanding should be used to explain why seismic hazards occur at conservative plate margins.

AO1

- Place knowledge of conservative plate margins.
- The types of movement associated with conservative plate margins.
- Why earthquakes occur at conservative plate margins.
- Examples include the San Andreas fault in California.

AO2

- At conservative plate margins there is no subduction, so there is no melting of rock and consequently an absence of volcanic activity. However, the frictional contact between the moving plates produces powerful shallow focus earthquakes, which can be very destructive.

- As plates slide past each other friction causes them to get stuck. Pressure builds up until the friction is overcome and movement occurs.
- The strength of earthquakes often relates to particular types of plate margin.

Question	Part	Marking guidance	Total marks
04		**To what extent are primary impacts of natural hazards more significant than secondary impacts?** **Use ONE OR MORE examples you have studied to support your answer.** **AO1** – Knowledge of the potential primary and secondary impacts of natural hazards. **AO2** – Application of knowledge and understanding to evaluate the potential relative primary and secondary impacts of natural hazards.	**20** **AO1=10** **AO2=10**

Level	Marks	Descriptor
4	**16–20**	**AO2** – Detailed and evaluative conclusion that is rational and firmly based on knowledge and understanding which is applied to the context of the question. **AO2** – Detailed, coherent and relevant analysis and evaluation in the application of knowledge and understanding throughout. **AO2** – Full evidence of links between knowledge and understanding to the application of knowledge and understanding of different contexts. **AO1** – Detailed, highly relevant and appropriate knowledge and understanding of place(s) and environments used throughout. **AO1** – Full and accurate knowledge and understanding of key processes and concepts throughout. **AO1** – Detailed awareness of scale and temporal change which is well integrated where appropriate.
3	**11–15**	**AO2** – Clear evaluative conclusion that is based on knowledge and understanding which is applied to the context of the question. **AO2** – Generally clear, coherent and relevant analysis and evaluation in the application of knowledge and understanding. **AO2** – Generally clear evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts. **AO1** – Generally clear and relevant knowledge and understanding of place(s) and environments. **AO1** – Generally clear and accurate knowledge and understanding of key concepts and processes. **AO1** – Generally clear awareness of scale and temporal change which is integrated where appropriate.

2	**6–10**	**AO2** – Some sense of an evaluative conclusion partially based on knowledge and understanding which is applied to the context of the question. **AO2** – Some partially relevant analysis and evaluation in the application of knowledge and understanding. **AO2** – Some evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts. **AO1** – Some relevant knowledge and understanding of place(s) and environments which is partially relevant. **AO1** – Some knowledge and understanding of key concepts, processes, interactions and change. **AO1** – Some awareness of scale and temporal change which is sometimes integrated where appropriate. There may be a few inaccuracies.
1	**1–5**	**AO2** – Very limited and/or unsupported evaluative conclusion that is loosely based on knowledge and understanding which is applied to the context of the question. **AO2** – Very limited analysis and evaluation in the application of knowledge and understanding. Lacks clarity and coherence. **AO2** – Very limited and rarely logical evidence of links between knowledge and understanding in different contexts. **AO1** – Very limited knowledge and understanding of place(s) and environments. **AO1** – Isolated knowledge and understanding of key concepts and processes. **AO1** – Very limited awareness of scale and temporal change which is rarely integrated appropriately. There may be a number of inaccuracies.
0	**0**	No creditable content.

Indicative Content

Content will be determined by the chosen example(s).

AO1

- Place knowledge of hazard risk areas and events.
- Knowledge of the socio-economic and political background related to the selected locations of hazard areas.
- Knowledge of the primary and secondary impacts of hazard events.
- Primary impacts can include: death/injury; destroyed buildings and infrastructure; loss of power supply and water; additional hazards (floods/landslides).
- Secondary impacts can include: fires/floods; disease; loss of life through injury or lack of initial treatment; lack of water; food shortages; destroyed social and economic structure.
- Knowledge of how primary and secondary impacts may be linked.
- Knowledge of the impacts of hazardous events in the chosen locations.
- Knowledge of how primary and secondary impacts can be mitigated/are being mitigated.
- Examples can be drawn from different parts of the world.
- Links to the Park model might be appropriate.

AO2

- An understanding that primary and secondary impacts will be determined by a number of factors, including;
  - type of hazard/magnitude of hazard
  - location
  - frequency of hazards
  - amount of preparation and the response
  - the level of emergency services
  - level of economic development.
- Consequently, there is no ‘correct’ answer to the question, it will be determined by individual circumstances.
- A comparative analysis of human response to hazards in relation to the Park model.

Section B – Hot Desert Systems and Landscapes **Total for this section: 40 marks**

Question	Part	Marking guidance	Total marks
05	**1**	**Which of the following describes an exogenous river in a desert?** Key – C: A river that has its source outside of a desert region.	**1** **AO1=1**

Question	Part	Marking guidance	Total marks
05	**2**	**Most hot desert landscapes are found between which of the following latitudes?** Key – B: 15–30 degrees north and south of the equator.	**1** **AO1=1**

Question	Part	Marking guidance	Total marks
05	**3**	**'Sand particles are repeatedly picked up and dropped by the wind.'** **This is a description of which process in deserts?** Key – C: Saltation	**1** **AO1=1**

Question	Part	Marking guidance	Total marks
05	**4**	**What is a barchan?** Key – A: A crescent-shaped sand dune.	**1** **AO1=1**

Question	Part	Marking guidance	Total marks
05	**5**	**Which term describes an area where sediment movement is largely self-contained?** Key – B: A sediment cell	**1** **AO1=1**

Question	Part	Marking guidance	Total marks
06		**Figure 2** and **Figure 3** show information about predicted climate change scenarios for desert areas in Africa (2000–2050). **Analyse the data shown in FIGURE 2 and FIGURE 3.**	**6** **AO3=6**

Level	Marks	Descriptor
2	**4–6**	**AO3** – Clear selection and analysis of the evidence that has been provided which makes appropriate use of data to support. Clear connections between different aspects of the data.
1	**1–3**	**AO3** – Some basic selection and analysis of the evidence that has been provided which makes limited use of data to support. Basic or limited connections between different aspects of the data.
0	**0**	No creditable content.

Indicative Content

Temperature

- Highest predicted temperature increase up to 4 °C.
- Areas of highest increase – 3.1–4.0 °C; North African coast/other coastal areas/some isolated areas west/east/south (Kalahari desert).
- Areas of significant increase (2.1–4.0 °C); North Africa, North-west Africa, small area on the east coast, South-west Africa (inland).
- East and South-west coast coastal areas generally 1.6–2.0 °C (Namib and Danakil deserts).
- Areas of lowest increase (0–1.5 °C) – Band across North Africa (part of the Sahara desert) and South-west tip of Africa.

Precipitation

- The pattern is more complex.
- Predicted change from –500 to +500 mm a year.
- Greatest decrease (–500–0 mm) – North and North-west Africa, South-west coastal areas, small area on east coast.
- Greatest increase (251–500 mm) – largely inland areas with small coastal areas on the east coast.
- In North Africa the change generally increases as you move south.
- In South-west Africa the change generally increases as you move inland.
- The largest area has a change of between 1–250 mm.
- Some areas have predicted increases and decreases relatively close to each other (generally coastal areas).

Question	Part	Marking guidance	Total marks
07		**Explain how weathering breaks down rocks in hot deserts.** **AO1** – Knowledge and understanding of the types of weathering that affect hot deserts. **AO2** – Applies knowledge and understanding to explain how weathering breaks down rocks in hot desert areas.	**9** **AO1=4** **AO2=5**

Level	Marks	Descriptor
3	**7–9**	**AO1** – Demonstrates detailed knowledge and understanding of the types of weathering that affect hot deserts. **AO2** – Applies knowledge and understanding to explain how weathering breaks down rocks in hot desert areas.
2	**4–6**	**AO1** – Demonstrates clear knowledge and understanding of the types of weathering that affect hot deserts. **AO2** – Applies clear knowledge and understanding to explain how weathering breaks down rocks in hot desert areas.
1	**1–3**	**AO1** – Demonstrates basic knowledge and understanding of the types of weathering that affect hot deserts. **AO2** – Applies basic knowledge and understanding to explain how weathering breaks down rocks in hot desert areas.
0	**0**	No creditable content.

Indicative Content

Knowledge and understanding should be used to show an understanding of weathering processes and how they break down rocks in areas of hot desert.

AO1

- How weathering affects desert landscapes.
- The distinction between mechanical (physical) weathering and chemical weathering.
- Mechanical weathering includes: thermal fracture; granular disintegration; block separation; shattering; exfoliation; salt crystallisation; frost shattering.
- Chemical weathering is usually linked to water and rock type.
- Rates of weathering are determined by temperature, precipitation and rock type.
- Weathering breaks down rock and is an important part of the desert cycle (weathering; erosion; transportation and deposition).
- Link between weathering and desert soils.
- Weathering is significant in terms of inputs, processes and components (landforms).

AO2

- Weathering is significant because of the extremes of climate.
- Extremes include hot and cold, the greater the extremes the greater the potential expansion and contraction.
- Temperature changes cause expansion and contraction and this weakens rock.
- The type of mechanical weathering is determined by the type and structure of rocks.
- Granular rocks tend to crumble.
- Weathering of heavily jointed rocks can cause block separation.
- The outer surface of rocks conducts most heat, leading to variations in the rate of expansion and contraction, causing exfoliation.
- Some rocks contain salts and these can be dissolved by water.
- How weathering is a significant part of the desert system.

Question	Part	Marking guidance	Total marks
08		**'The causes of desertification are a combination of natural and human factors.'** **Evaluate this statement with reference to ONE OR MORE examples you have studied.** **AO1** – Knowledge of the natural and human causes of desertification. **AO2** – Application of knowledge and understanding to evaluate the relative significance of natural and human causes of desertification.	**20** **AO1=10** **AO2=10**

Level	Marks	Descriptor
4	**16–20**	**AO2** – Detailed evaluative conclusion that is rational and firmly based on knowledge and understanding which is applied to the context of the question. **AO2** – Detailed, coherent and relevant analysis and evaluation in the application of knowledge and understanding throughout. **AO2** – Full evidence of links between knowledge and understanding to the application of knowledge and understanding of different contexts. **AO1** – Detailed, highly relevant and appropriate knowledge and understanding of place(s) and environments used throughout. **AO1** – Full and accurate knowledge and understanding of key processes and concepts throughout. **AO1** – Detailed awareness of scale and temporal change which is well integrated where appropriate.
3	**11–15**	**AO2** – Clear evaluative conclusion that is based on knowledge and understanding which is applied to the context of the question. **AO2** – Generally clear, coherent and relevant analysis and evaluation in the application of knowledge and understanding. **AO2** – Generally clear evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts. **AO1** – Generally clear and relevant knowledge and understanding of place(s) and environments. **AO1** – Generally clear and accurate knowledge and understanding of key concepts and processes. **AO1** – Generally clear awareness of scale and temporal change which is integrated where appropriate.

2	**6–10**	**AO2** – Some sense of an evaluative conclusion partially based on knowledge and understanding which is applied to the context of the question. **AO2** – Some partially relevant analysis and evaluation in the application of knowledge and understanding. **AO2** – Some evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts. **AO1** – Some relevant knowledge and understanding of place(s) and environments which is partially relevant. **AO1** – Some knowledge and understanding of key concepts, processes, interactions and change. **AO1** – Some awareness of scale and temporal change which is sometimes integrated where appropriate. There may be a few inaccuracies.
1	**1–5**	**AO2** – Very limited and/or unsupported evaluative conclusion that is loosely based on knowledge and understanding which is applied to the context of the question. **AO2** – Very limited analysis and evaluation in the application of knowledge and understanding. Lacks clarity and coherence. **AO2** – Very limited and rarely logical evidence of links between knowledge and understanding in different contexts. **AO1** – Very limited relevant knowledge and understanding of place(s) and environments. **AO1** – Isolated knowledge and understanding of key concepts and processes. **AO1** – Very limited awareness of scale and temporal change which is rarely integrated appropriately. There may be a number of inaccuracies.
0	**0**	No creditable content.

Indicative Content

Content will be determined by the chosen example(s).

AO1

- Knowledge of the physical and human causes of desertification (Physical – Changing climatic patterns; Human – Population pressures; overgrazing/overcultivation; poor water management, using vegetation for fuel; tourism).
- Knowledge of the socio-economic and political background related to the risk of desertification.
- Natural causes of desertification are largely climatic change, especially precipitation patterns.
- Although climate change over thousands of years is part of the natural cycle, enhanced climate change in the last 200 years might be considered a human factor.
- Climate change has altered precipitation patterns and increased temperatures.
- There has been increasing incidence of droughts in desert areas.
- The balance of causes will vary in relation to local physical and human conditions.

AO2

- Evaluate the extent to which natural and human factors combine to cause desertification with reference to a range of circumstances, such as the ones listed below.
- Climate change has meant an increase in temperature and decrease in precipitation in some places (climate change can be considered as both a physical and a human factor).
- Increasing droughts have made vegetation growth more problematic and increased the risk of desertification.
- Population pressure leads to overuse of marginal land for food production, reducing fertility and increasing the risks of erosion.
- Overcultivation on marginal land reduces fertility and makes soil erosion more likely.
- Overgrazing on marginal land (idea of carrying capacity) puts pressure on the land and leaves it more vulnerable to erosion.
- Irrigation can increase the salt content on the surface (salinisation), leading to increased infertility and soil loss.
- Removing vegetation for firewood exposes the soil to wind and water erosion.
- Tourism in semi-desert areas can damage vegetation and put pressure on fragile environments, leaving them more vulnerable to erosion.

Assessment Objective grid

	AO1	AO2	AO3	Total
Section A				
01.1	1			1
01.2	1			1
01.3	1			1
01.4	1			1
01.5	1			1
02			6	6
03	4	5		9
04	10	10		20
Section B				
05.1	1			1
05.2	1			1
05.3	1			1
05.4	1			1
05.5	1			1
06			6	6
07	4	5		9
08	10	10		20
Unit total	38	30	12	80