



**12<sup>th</sup> International Geography Olympiad**

**Tver, Russia**

**11–17 August 2015**

**Written Response Test**

**Marking Scheme**

## Instructions for Markers

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1. **Check if the iGeo student numbers are on each sheet (on odd pages) before dividing up the Test.**
2. This test consists of 6 Sections.
3. One whole Section per marker and double-checker. One Section per marker-pair who also perform double-checking for their Section.  
Some lengthy (more than 2 pages) Sections may be divided for two marker-pairs. The layout of the Marking Scheme follows this logic as much as possible.
4. Check whether the answer continues outside the designated area, on the margins or as clearly marked on blank pages.  
No credits will be given to answers in the Resource Booklet.
5. The maximum total mark is 90.  
The mark for each question is given in the left margin at the beginning of the question.  
There is a maximum of 15 marks for each Section.
6. Get the hang of the full range of answers by reading through a few papers with your co-marker before you start your marking.
7. **These answers are not exhaustive. Credit any relevant answer.**
8. The Test uses two marking systems: point and level marking.
9. Half marks can only be given where indicated.
10. Mark only the required number of answers (reasons, examples, etc.).  
For instance, if the question asks for 2 reasons and there is more than 2, only the first 2 reasons should be marked.
11. Please develop your own marking/correcting system (using +/-, x/0,  $\surd$  marks), underlining, comments etc. to ease double-checking and sample marking.
12. Put your mark next to the question number in the column on the left – it eases the work of the person who has to put the numbers into MS Excel.
13. Please write down any inconsistencies of the Marking Scheme and additional answers or answers not accepted and hand them in after marking to improve the final Marking Scheme.
14. The Moderators (Sue and Anu) will sample the marking of all teams.

## Section A: Weathering

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2m 1. Explain how **erosion** is different from **weathering**.

Must mention transport/moving agent to get 2 marks.

**Erosion** is different from weathering as it involves a **moving agent** (wind, water or ice) for rock and soil particles whereas **weathering** is a set of processes that **breaks solid rocks into fragments** at the Earth's surface (by the action of rainwater, extremes of temperature, and biological activity) *in situ*.

4m 2. Study Resource Booklet Figure A1: Types of weathering.

For both photographs a and b, identify the **type** of weathering shown and explain the **processes** that lead to such an outcome.

Photograph a – type of weathering: **physical (mechanical)** weathering – 0.5m.

Students may mention different types of physical (mechanical) weathering and describe them, which can be credited.

Processes: Physical weathering is caused by the effects of changing temperature on rocks, causing the rock to break apart. The process is sometimes assisted by water.

Examples may include:

- **Freeze-thaw** occurs when water continually seeps into cracks, freezes and expands, eventually breaking the rock apart.
- **Frost Wedging** – water expands when it freezes.
- **Thermal Expansion and Contraction** – heating causes rock to expand, cooling results in contraction; different minerals expand and contract at different rates. This phenomenon will look very similar to frost wedging and salt crystal growth, but will typically happen in climates that undergo extreme diurnal temperature changes – 1.5m.

Photograph b – type of weathering: **chemical** weathering – 0.5m.

Students may mention different types of chemical weathering and describe them, which can be credited.

Processes: Chemical weathering is caused by water reacting with the mineral grains in rocks to break them down into new minerals (clays) and soluble salts. These reactions occur particularly when the water is slightly acidic (acid rains).

Examples may include:

- **Solution** – removal of rock in solution by acidic rainwater. In particular, limestone is weathered by rainwater containing dissolved CO<sub>2</sub>, (this process is sometimes called carbonation).
- **Hydrolysis** – the breakdown of rock by acidic water to produce clay and soluble salts.
- **Oxidation** – the breakdown of rock by oxygen and water, often giving iron-rich rocks a rusty-coloured weathered surface – 1.5m.

2m

3. Account for 2 ways in which **biological** weathering can occur.

Answers must be written in sentences or phrases; 'roots' does not gain a mark.

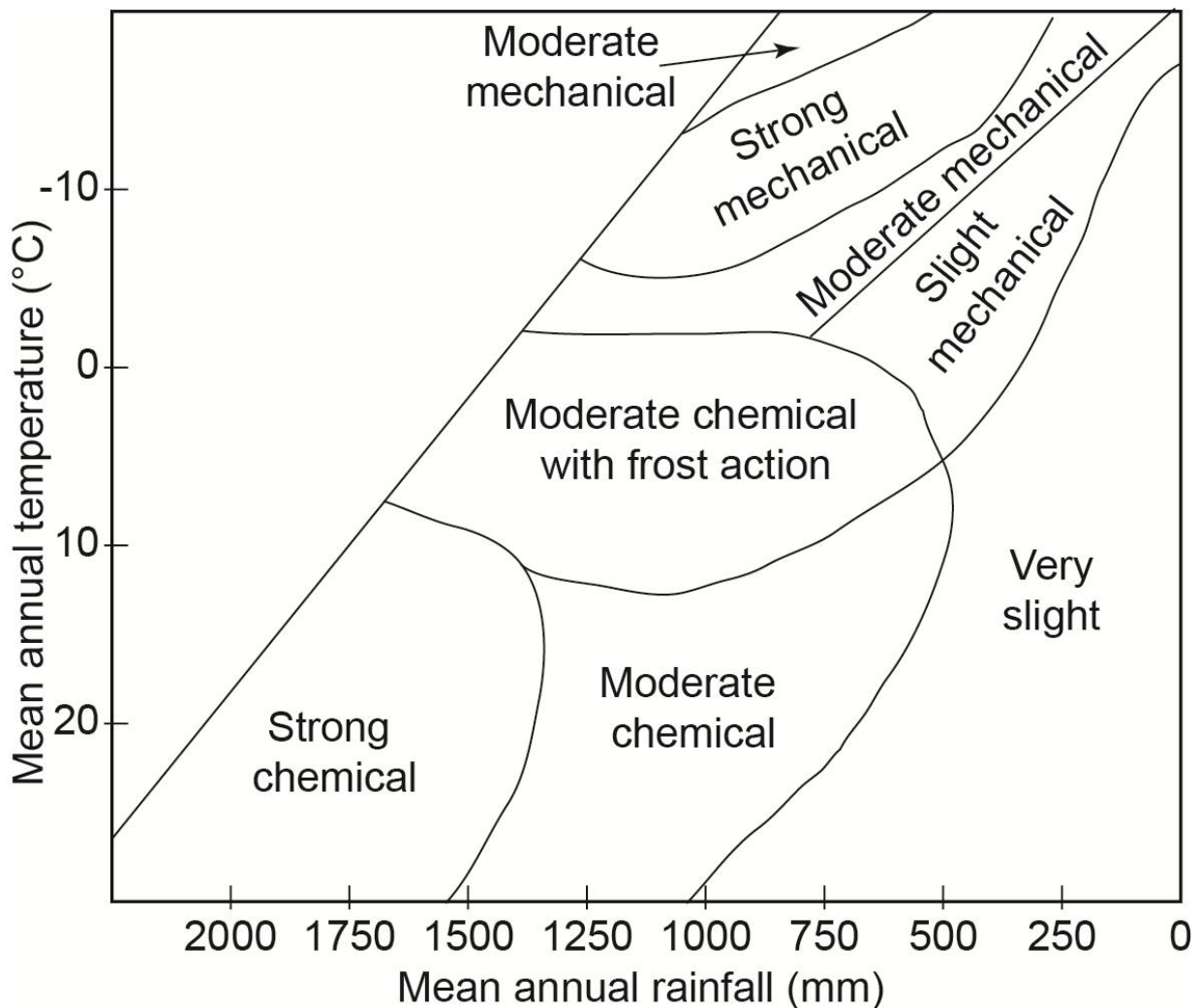
- Trees put down roots through joints or cracks in the rock in order to find moisture. As the tree grows, the roots gradually prize the rock apart.
- Even the tiniest bacteria, algae and lichens produce chemicals that help break down the rock on which they live, so they can get the nutrients they need.
- Many animals, bore into rocks for protection either by scraping away the grains or secreting acid to dissolve the rock.

1m

4. Study **Peltier's weathering diagram** below.

Determine (circle the right answer) whether the role of **chemical** weathering will increase if:

- Air temperature decreases and precipitation decreases,
- Air temperature decreases and precipitation increases,
- Air temperature increases and precipitation decreases,
- d) Air temperature increases and precipitation increases.**



Peltier's weathering diagram: weathering regions of the world in relation to mean annual temperature and rainfall, after Peltier (1950)

(<http://www.slideshare.net/maliadamit/rock-and-weathering-booklet>).

4m

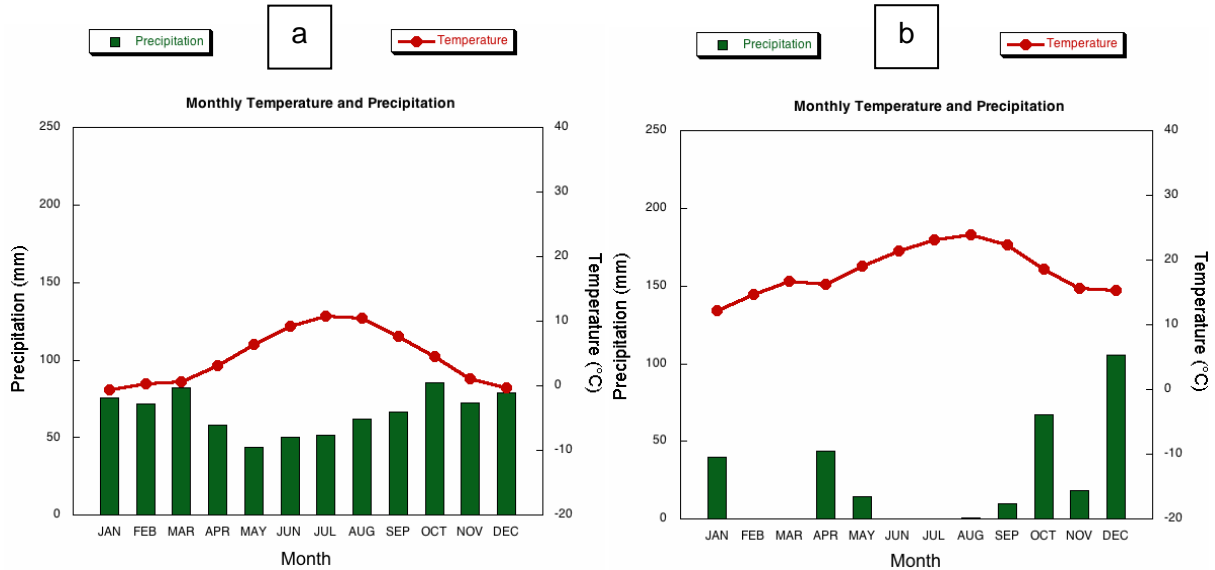
5. Study **climate graphs** a and b below.

a) Match climate graphs a and b with the right city from the list below:

- Cape Town (South Africa),
- Casablanca (Morocco),
- Kingston (Jamaica),
- Kolkata (India),
- Lima (Peru),
- Reykjavík (Iceland).

b) Use Peltier’s weathering diagram above to identify the **dominant type of weathering** in these cities.

Write your answers in the table below.



Climate graphs

(<http://drought.unl.edu/DroughtBasics/WhatisClimatology/ClimographsforSelectedInternationalCities.aspx>).

Climate graph	City	Dominant type of weathering
a	Reykjavík (Iceland)	Moderate chemical weathering with frost action
b	Casablanca (Morocco)	Very slight weathering

2m

6. What other factors can affect the **rate** of weathering **apart from climate**?

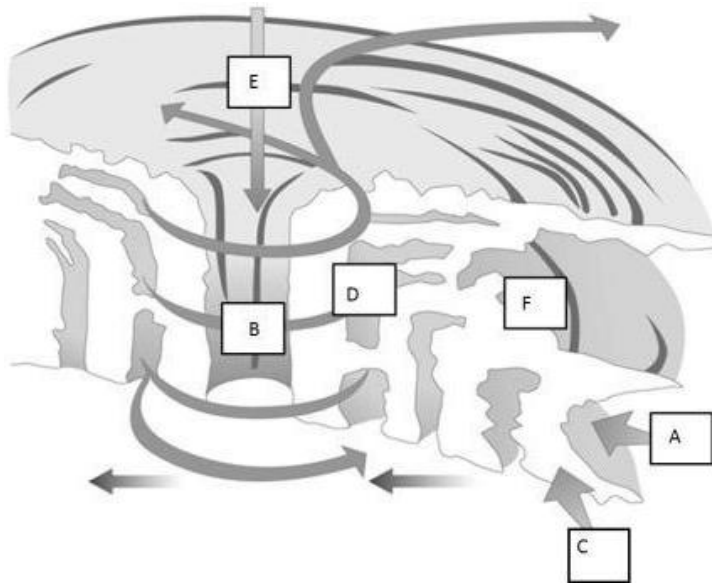
- Properties of the parent rock – rock type, mineral composition and structure (differential weathering),
- Amount of surface area exposed,
- Length of exposure,
- The topography of the land (e.g. cliffs, caves, slopes),
- The activities of plants, animals, and humans, pollution leading to acid rain,
- Amount of soil coverage affects chemical weathering.

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## Section B: Tropical Storms

2m

- Study the diagram below: **Cross-section of a tropical storm.**  
Label the diagram below using letters (A–F) for the following phrases:  
A – Warm, moist air drawn into the area of low pressure,  
B – Central eye where there is no cloud,  
C – Water vapour evaporated from the warm sea surface,  
D – Spiralling winds around the low pressure,  
E – Descending dry air drawn into the centre of the system,  
F – Bands of rain and thick cloud.



Cross-section of a tropical storm  
(Miller, T. (ed.) 2009: Geography Teacher Guide. Heinemann).

- 6 correct – 2m,
- 5 correct – 1.5m,
- 4 correct – 1m,
- 3 correct – 0m.

2m

- Study Resource Booklet Figure B1: Path of Cyclone Hudhud.  
**Describe** the **movement** of Cyclone Hudhud and its **changes in magnitude** between 9<sup>th</sup> and 13<sup>th</sup> October 2014.

A student has to mention both direction and magnitude to receive 2 marks.

- **Direction:** weather system moved in north-west direction OR moved from Long Island to eastern India – 1m.
- **Magnitude** increased from October 9<sup>th</sup> to 12<sup>th</sup> and reduced by 13<sup>th</sup> of October 2014 after hitting landfall – 1m.

1m

- Study Resource Booklet Figure B1: Path of Cyclone Hudhud.  
Give a reason for the **changes** in the **magnitude** of Cyclone Hudhud.

The reason for the change in magnitude was due to the **presence or absence of moisture**. There was warm moisture feeding the weather system as it moved over the ocean. However, when it hit landfall, the lack of warm moisture decreased the magnitude of the cyclone – 1m.

2m

4. List the **features of the weather** you could measure at a **weather station** during the passage of a tropical cyclone.

- Rainfall or rainfall intensity (amount of rainfall falling over a period of time) – 0.5m,
- Wind speed – 0.5m,
- Wind direction – 0.5m,
- Atmospheric pressure – 0.5m,
- Temperature – 0.5m,
- Humidity / cloud cover (only accepted if precipitation/rainfall and cloud cover / humidity were not mentioned) – 0.5m.

4m

5. Account for the **global distribution** of tropical cyclones/hurricanes.

Level marking:

Award 2 marks each for 2 fully-elaborated points.

Award 1 mark for non-elaborated point:

- Tropical cyclones typically **found between 30 degrees North and South of Equator** – 1m. Tropical cyclones develop in **warm ocean waters of more than 26°C**, with a depth of at least 50 m – 1m (if answer mentions warm/hot water without specific temperature, no marks).
- **Track of the tropical cyclones moves away from the Equator** – 1m.
- As the **Coriolis force** helps maintain the low pressure of the weather system, cyclones are typically found near, but not at the Equator – 1m.
- Tropical areas also tend to have an atmosphere which cools fast enough with height (is **“unstable”** enough) such that it encourages thunderstorm activity – 1m.
- It is the thunderstorm activity which allows the **heat stored in the ocean waters to be liberated** for the tropical cyclone development – 1m.

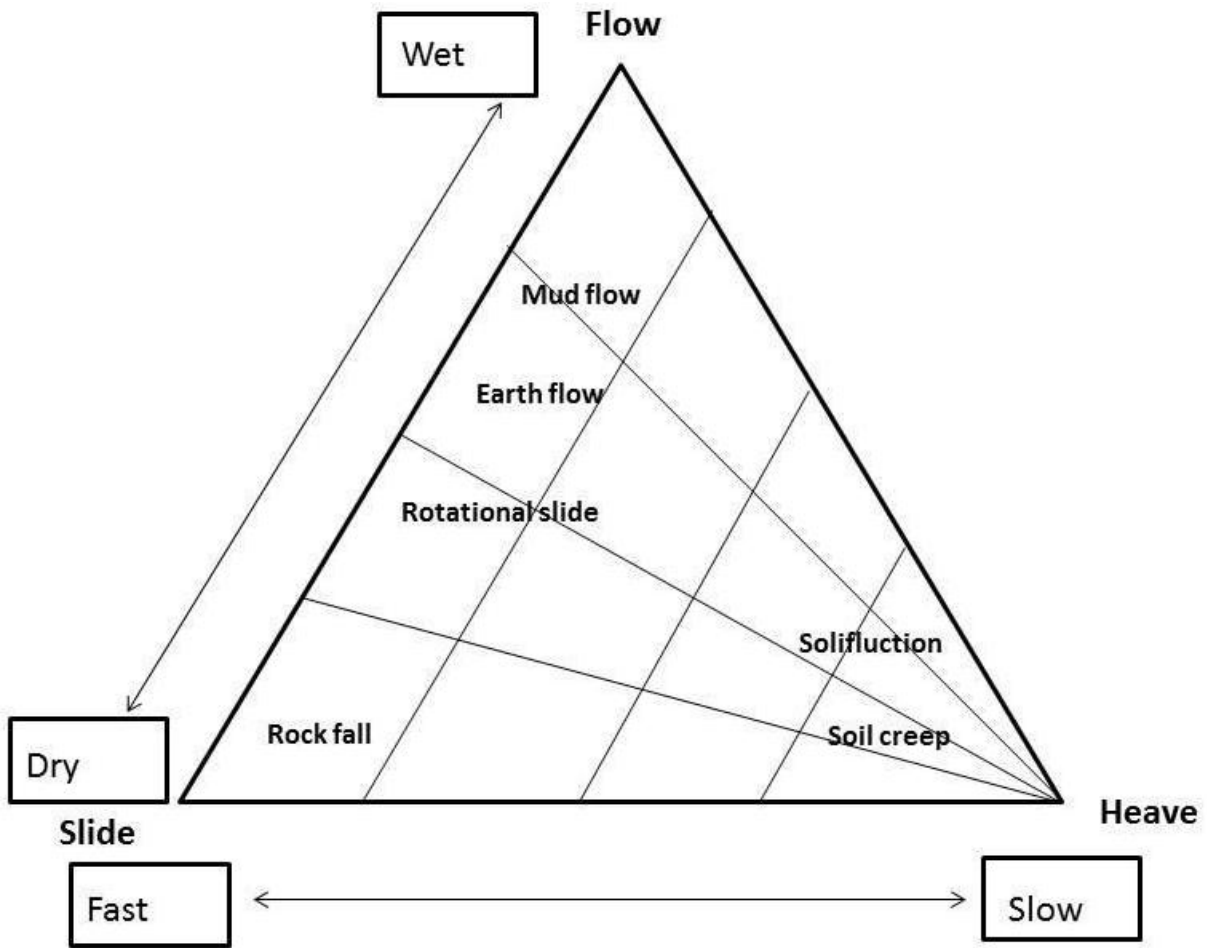
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1m

6. Study the diagram below: **Classification of mass movements.**

Fill in the boxes in the diagram below using the following words: 'dry', 'fast', 'slow' and 'wet'.



Classification of mass movements

(<http://wmc.landfood.ubc.ca/webapp/media/IWM/watershed-science/sediment-cycles/Flow%20Diagram.png>).

Award 1 full mark. No 0.5 marks awarded.

3m

7. Explain how **mud flows**, **earth flows** and **rotational slides** (see Classification of mass movements diagram above) can be possible **consequences** of tropical storms.

- Tropical storms produce **widespread torrential rains** which can cause massive flooding and trigger wet types of mass movements, for e.g. earth flows, landslides and debris flows – 1m.
- Due to the torrential rains from the cyclones the **soil becomes saturated with water** inducing mass movements such as earth flow – 1m.
- The saturated soil causes an increase in the shear stress acting on the **slope / slope becomes heavier / more gravity acts on slope**, thus triggering the mass movement – 1m.

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## Section C: Mapping Skills and Cold Environments

2m

1. Study Resource Booklet Figure C1: A photograph of an area of Iceland and Figure C2: A large-scale map of an area of Iceland.
  - a) Mark with an **X** the position where the photographer was standing on the marked trail on the **black-and-white** map below.
  - b) Draw an **arrow** to show the direction in which the photograph was taken on the **black-and-white** map below.

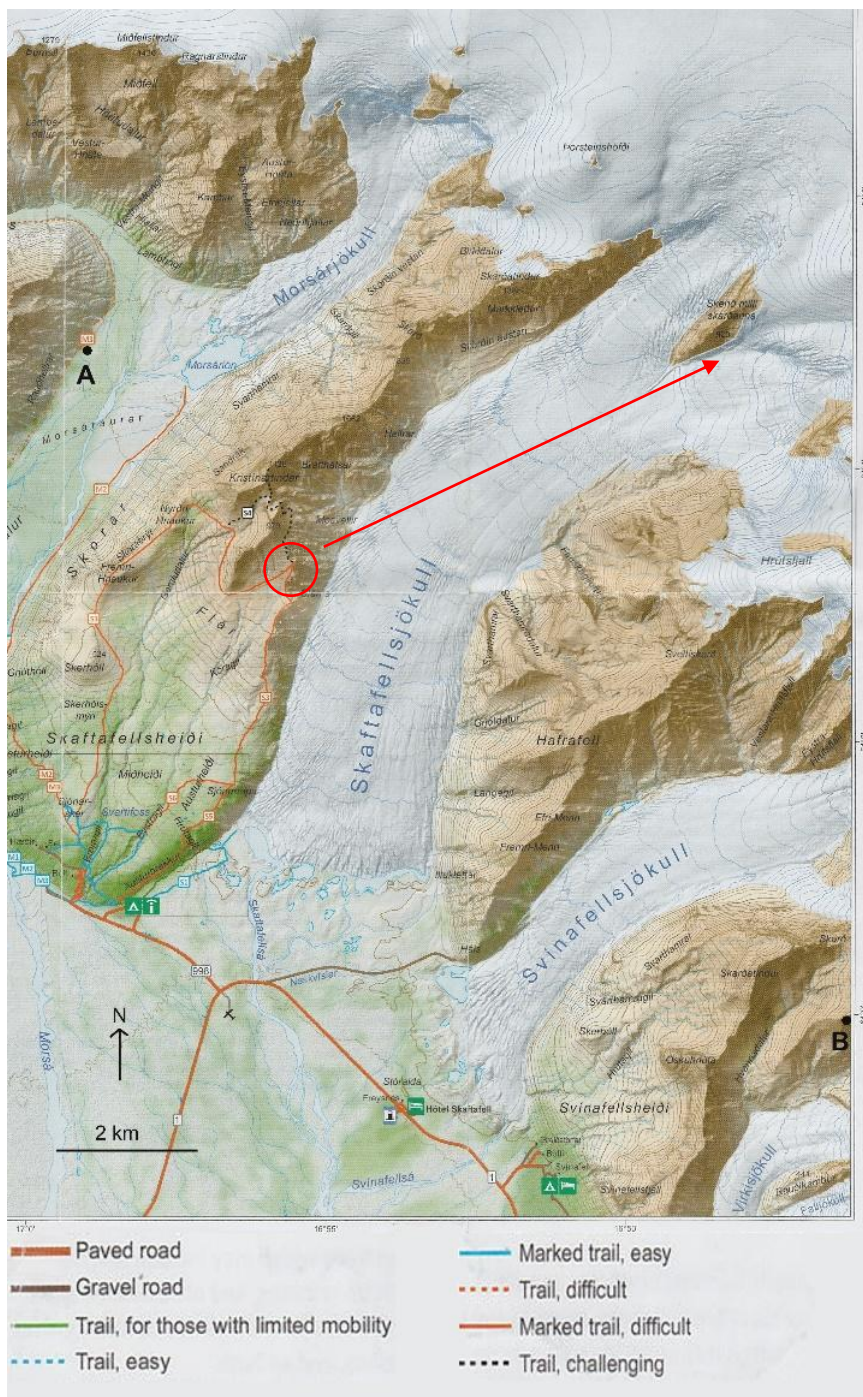


Figure C2: A large-scale map of an area of Iceland (Skafafell).

Photograph was taken from red path (marked trail, difficult).  
Also see overlay for this question.

2m

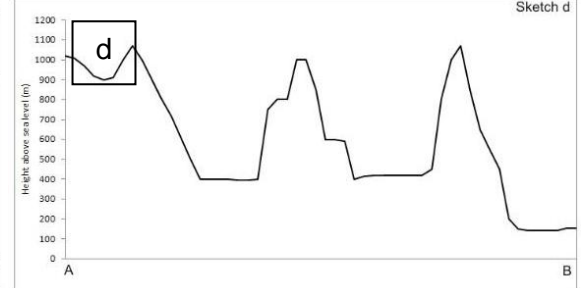
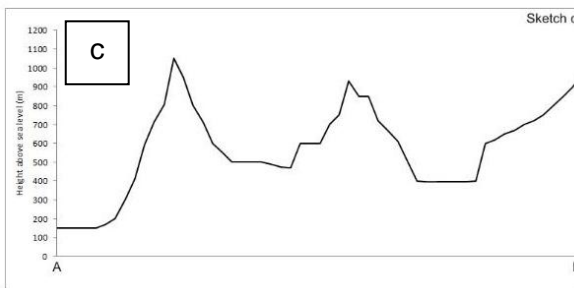
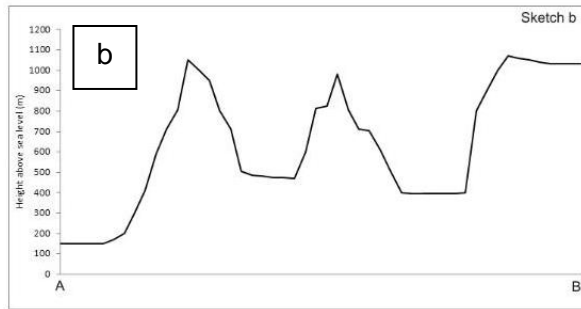
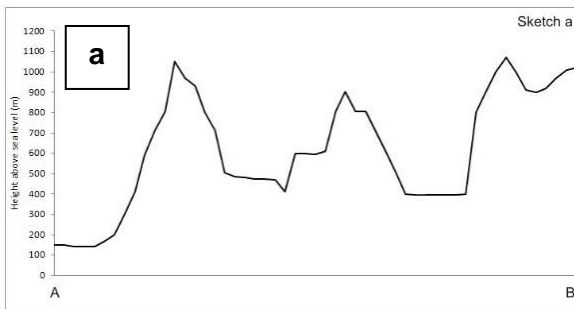
2. Study Resource Booklet Figure C2: A large-scale map of an area of Iceland. Describe the **distribution** of the ice masses.

The most ice masses can be found in NE part; area covered the least with ice masses is in SW part – 1m.

Area of ice to the NE of the map (1m) which feeds into 3 glaciers ('fingers' of ice) which flow down the valleys (1m) the largest of these is Skaftafellsjokull (1m).

1m

3. Study Resource Booklet Figure C2: A large-scale map of an area of Iceland. Which sketch **cross-section** below – a, b, c or d – best represents the shape of the land between points A and B?



a

This Section continues on the next page.



1m

4. Study Resource Booklet Figure C3: A small-scale map of an area of Iceland. Draw a rectangle to represent the area shown by the large-scale map (Figure C2) on the **black-and-white map below**.



Figure C3: A small-scale map of an area of Iceland (Mál og menning).

Also see overlay for this question.

2m

5. Outline the ways in which **photographs** (e.g. Figure C1) and **maps** (e.g. Figures C2 and C3) can contribute to describing the characteristics of an area.

- Maps show a plan view so indicate scale and direction.
- They show permanent features e.g. road types, accommodation but tend to be out of date, particularly in such a dynamic environment.
- They can be at different scales for comparison.
- Photographs capture an instant of time so are more current, showing what is actually there at that time and
- other data e.g. colours, signs, vegetation.

3m

6. Explain how **climatic conditions** lead to the **formation** of ice masses.

The key is that temperatures are low in the short 'summer season' so that the winter snowfall does not all melt. This remains in place so that the following year's snowfall falls on top and the weight of the snow leads to formation of ice which accumulates over time.

- Mention of low temperatures **and** snowfall (precipitation) – 1m.
- Not all snow melts in the 'summer period' – 1m.
- Accumulation (pressure/compression/recrystallization) year upon year leads to formation of ice – 1m.
- Albedo as a positive feedback for growth of ice masses – 1m.

4m

7. Using your own knowledge, outline 2 ways in which cold environments can be used for **short term gains**.

Each example (2 marks for each) shows how the environment provides economic opportunities.

Cause-effect links are stated and clearly explained 2 marks e.g.

- Cold environments are used for skiing which creates a demand for tertiary employment in hotels or
- High steep mountains provide beautiful scenery which attracts tourists – 2m.

If no links are established and only economic activity mentioned 1 mark e.g.

- Tourism provides jobs/money or lots of people use the environment for skiing or
- Resource exploitation, agriculture, recreation and tourism – 1m.

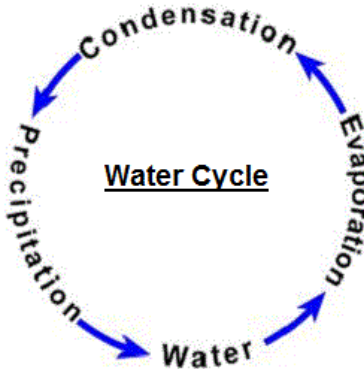
ACCEPTED: farming, logging, seed bank, conservation for tourism (paying for entrance of national park).

NOT ACCEPTED: scientific research or fresh water supply or ice mining.

## Section D: Water Conflicts

2m

1. Study the diagram below: **A simplified diagram of the water cycle.**  
Outline 2 ways in which **human interference** in the water cycle can affect the **availability of water**.



A simplified diagram of the water cycle  
(ygraph.com).

- 1 mark for each explained example. One word answers will not achieve a mark, e.g. runoff.
- Precipitation levels can be altered by local factors such as forest clearance, which reduces evapotranspiration and leads to a drier climate.
  - Globally climate change may alter precipitation patterns so that some areas have reduced levels and others increased.
  - River runoff can be altered by dam construction and abstraction for industry and domestic use, reducing availability in particular locations.
  - Land use changes can alter infiltration rates which in the long term can have consequences for groundwater availability.
  - Groundwater flow can be altered by over abstraction of water lowering water tables beyond the reach of wells.
  - Rivers, lakes and groundwater can become polluted which reduces the availability of useable water.
  - Cloud seeding is believed to increase rainfall in some areas.

This Section continues on the next page.

1m

2. Study the table below: **Statistics of the 10 countries of the Nile Basin.**  
Complete the **percentages** in column 6 (Share of water withdrawn from Nile (%)).

Statistics of the 10 countries of the Nile Basin

(Aquastats: FAO).

1	2	3		4	5	6	7		
Country	Precipitation (mm)	Population (millions)		Urban population (% 2014)	Total water withdrawn from Nile (million m <sup>3</sup> )	Share of water withdrawn from Nile (%)	Withdrawal by use (%)		
		2010	2025 (predicted)				Agriculture	Domestic	Industry
Sudan	250	33	58.4	34	26,935	24.9	97	2.6	0.4
Ethiopia	848	83	126.9	19	5,550	5.1	93.6	6	0.4
Egypt	51	78.7	97.3	43	68,000	62.8	86	8	6
Uganda	162	31.7	48.1	16	637	0.6	40	44.7	15
Burundi	1,274	7.1	10.1	12.1	288	0.3	77	17	0.6
Rwanda	1,212	8.1	15.8	18.9	150	0.1	68	24	8
Tanzania	1,071	52.3	70.9	26.4	5,184	4.8	89.4	10.2	0.5
Eritrea	384	4.3	8.7	20	582	0.5	94.5	5.3	0.2
Congo (DRC)	1,210	62.2	81.4	41	356	0.3	31.5	52.2	16.3
South Sudan	120	9.9	16.5	17	658	0.6	94.7	5	0.3
<b>Total</b>					<b>108,304</b>				

2m

3. Study the table above: Statistics of the 10 countries of the Nile Basin.  
Draw a **diagram** in the space below, using the figures from column 6 to show how the **water withdrawn** from the Nile is **shared** between countries.

The correct answer here is a divided bar (representing 100%) or a pie chart. Only these diagrams can score 2 marks if accurate.

A histogram (i.e. a series of bars next to one another) would present problems in accuracy, but can score 1 mark.

The very best candidates will recognise that accuracy is a problem and have a category of 'other' which is the sum of the smallest 3 or possibly 6 countries.

This Section continues on the next page.



2m

4. Study Resource Booklet Figure D1: A physical and political map of the Nile Basin and the table above: Statistics of the 10 countries of the Nile Basin. Using them and your own knowledge, give 2 reasons why the **physical geography** of this area puts **water supply at risk** in this region.

Differentiate between a fact and a reason, for example: “It’s a desert” vs. “It’s a desert so very hot and low rainfall leading to...”.

- The source region is in the Ethiopian Mountains and plateau region; ice and snow stores water which is released in the spring and summer into rivers. This process is sometimes unreliable.
- The seasonality of physical supply of water.
- Climate change may result in a reduction of precipitation and therefore a reduction in water available.
- The finite nature of physical water supply (surface rivers and lakes + groundwater aquifers).
- Tectonic movements (in the future) may have an influence on the Blue Nile direction of flow.

4m

5. Study Resource Booklet Figure D1: A physical and political map of the Nile Basin and the table above: Statistics of the 10 countries of the Nile Basin. Using them and your own knowledge, discuss the **threats to water security** arising from the **human geography** of the area.

Level marking:

Award higher marks (3–4) for fully-elaborated points.

Award lower marks (1–2) for non-elaborated point (too many assume enough to say “conflict between nations” without explanation):

- **Increasing competition for water** from the countries who extract from the River Nile may lead to **wars and other conflicts**.
  - Egypt has the largest population in river Nile Basin area and thus the largest water withdrawal but on the other hand does not control its source – it depends on others how much water will come to the most densely populated area of Egypt (northern part – delta area).
- **Rapid population growth** which is projected to increase sharply to 2025 will put increasing strain on resources. Some might see this as the fundamental problem i.e. too many people and a finite (or diminishing) supply.
- **Urbanisation** (e.g. Egypt) is progressing rapidly and more water will be needed to support improved urbanised lifestyle. Egypt already takes out the most from the river.
- Rising demand as the **economies of the region move from an LEDC/RIC model towards an NIC/MEDC one**, particularly in Egypt. Link to how water use changes as a result of development.
- **Agricultural water demand** will also rise and there is pressure to increase food supply. These demands might be seen as unsustainable as the water simply is not available.
- A possible threat is that of **climate change**. Good candidates might recognise that this is an unknown.
- Countries along the Nile **building dams to increase the amount they can withdraw from the river**.

Ethiopia plans to build four dams on Blue Nile which can significantly influence on future problems with water supply, especially in countries downstream (South Sudan, Sudan, Egypt).

6. Study Resource Booklet Figure D2: Grand Ethiopian Renaissance Dam and Figure D3: Solar panels provide electricity for villages in Egypt with no access to centralised power. They provide sustainable solutions for the supply of water, for example from groundwater sources.

**Evaluate** the effects of projects such as:

- a) The Grand Ethiopian Renaissance Dam and
  - b) solar powered water pumps
- on the **future provision of water** for Sudan and Egypt.

Level marking: Command word 'evaluate' is a higher-order term.

3–4 marks: Must make some comparative statement about the relative importance of the two types of project, e.g. 'In the future big projects will provide large amounts of water for urban areas, industry and agri-business. Intermediate technology will be able to supply large numbers of rural villages with sustainable access to water, for a much lower cost than piping in water from the big projects'.

1–2 marks: Mentions some effects without making a judgement about the effectiveness.

1 mark for each effect fully described.

a)

- Building dams will mean that water levels in the Nile river will decrease; that will have negative influence on the irrigation process.
- A decreased amount of material will reach the Nile delta and will lead to delta destruction.
- More dams on the river will lead to reduced amounts of water available for each dam to operate its hydro electric power function.
- The temperature of water will rise thus changing biodiversity in Nile waters which could lead to an increase in diseases.

b) Intermediate technology:

- Has the benefits of being low cost.
- Can be built and maintained by the users and dramatically improves water supply, probably without a major impact on those downstream.
- Has limited environmental impacts on the river.
- The projects rely on a secure supply in the first place.
- They may be difficult to upscale and not suitable for urban areas and industry.

## Section E: Living in Slums

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3m

1. Study Resource Booklet Figure E1: Satellite image of Petare slum in Caracas, Venezuela, 2010.

**Compare the features of land use** of the Petare slum area with its surrounding area.

Answer must have comparative phrase or word, otherwise only 1 mark, e.g. comparative adjectives such as 'denser', 'more', 'less', 'while' 'whereas' etc.

Slum area is characterised by very compacted (high density) built area and little vegetation (very few green areas), while the surrounding area is less densely built (1m) and characterised by more green areas and open spaces (1m). Slums have very narrow streets and an irregular road network while surrounding area has more regular road network (1m).

3m

2. Study Resource Booklet Figure E2: Map showing urban land use in Madras (Chennai), India. **Explain why slum settlements** are located at each of the sites A, B and C (marked on the map) within Madras (Chennai).

Site A: They settle on state owned locations within the city that are mostly undesirable for other people (next to railway tracks or roads). A market nearby where they can buy groceries (or sell their own products). A peripheral site undesirable for living.

Site B/C: Since they don't have supply of clean water, they want to be close to natural water source (rivers/ocean (bay)) where possible floods influence on lower price of land, availability to fish.

Site C/B: They settle next to industry (factories) to be near to centres of economic activities – sources of possible employment (for a mostly low-level/poorly educated slum population) but pollution and low quality of land influence on low land prices.

This Section continues on the next page.

4m

3. Study Resource Booklet Figure E3: Socio-economic structure of the slum population in Madras (Chennai), India, 2006. Identify 2 different **obstacles to achieving a higher standard of living** faced by slum dwellers in Chennai, India. For each obstacle, outline why it is a problem.

Award 2 marks for each valid and explained obstacle.

- The large majority, more than 95%, of slum dwellers receive only primary education or less. Their lack of a variety of skills and knowledge make it hard for them to obtain high paying jobs.
- The large majority of slum dwellers, about 90%, live in small spaces of less than 20 m<sup>2</sup>, this deprives them of privacy and raises the risk of the spread of infectious diseases.
- The large majority of slum dwellers, more than 80%, earn less than 26 Euros a month. Despite the lower cost of living in India, the amount is not likely to be sufficient to pay for daily meals, transport, and education and healthcare services.
- The Caste System – lower cast members (“untouchables”) are not able to find a better paid jobs → obstacle for their children’ better future.

5m

4. The Tamil Nadu Slum Clearance Board aims to **clear all the slums** in Chennai and provide self-contained hygienic housing for slum dwellers. Discuss the **advantages** and **disadvantages** of this approach.

Level marking:

Award no more than 2 marks if answer contains only advantages or disadvantages.

Award no more than 1 mark for each valid advantage or disadvantage.

Award an additional mark for relevant elaboration of advantage/disadvantage.

Advantages (and discussion):

- Replacing the existing slum facilities with new housing will provide dwellers with sanitation, clean water supply, sewage, waste management, gas and electricity.
- It would improve living conditions (health) and quality of life of slum dwellers (sufficient living space and thus more improved hygienic conditions).
- It would provide access to adequate sanitation in form of private or public toilets that would be shared by a reasonable number of people.
- Provision of such amenities should motivate the slum families to move to new tenements voluntarily (without being evicted).
- Clearing the slums open possibilities for social mobility.

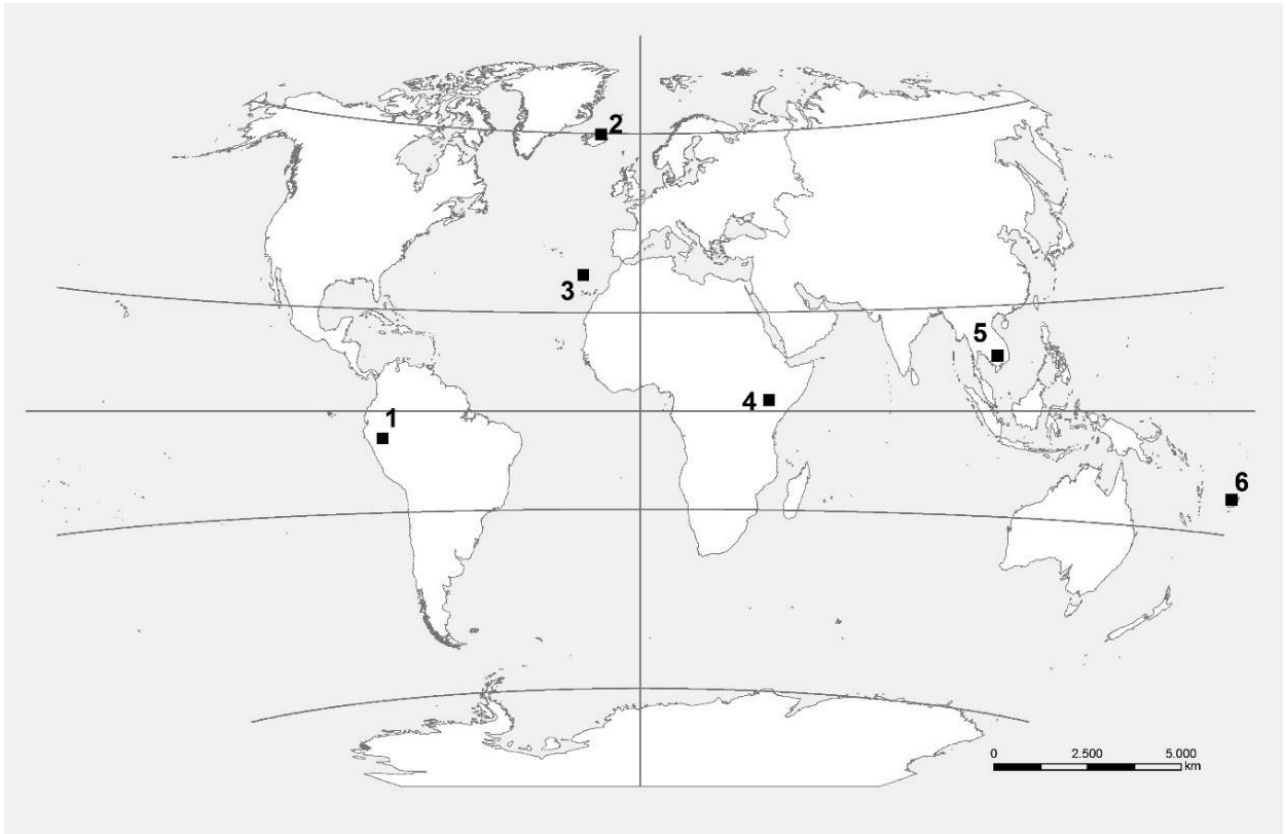
Disadvantages (and discussion):

- It is costly and difficult to improve the basic infrastructure of mature slums that are densely packed.
- Resettlement will disrupt the existing social systems in the slum and relationships among dwellers.
- Resettlement area may be further from employment opportunities, meaning either less chance of finding a job, or more time spent travelling.

## Section F: Geography and Cultural Diversity

4m

1. Study Resource Booklet Figure F1: Traditional houses around the world (a–d). These traditional houses are **characteristic of which numbered locations** (■) marked on the world map below? Write your answers in the table below.



World map with numbered locations (■).

Traditional house	Location number
a	5
b	3
c	2
d	6

2m

2. Identify 4 factors that **influence** different types of traditional houses in particular locations around the world.
- Cultural tradition/heritage,
  - Available building materials/resources,
  - Impact of natural conditions (environment),
  - Functional needs,
  - Contemporary “fashion” in building (construction) industry,
  - Religion, beliefs,
  - Economic situation/wealth.

- 1m 3. Study Resource Booklet Figure F2: Map of South America’s indigenous languages. Compare the **distribution** of the **native languages** in **Brazil** and in **Peru**.
- 1 mark for correct comparison – using comparative words – ‘larger’ ‘more’ ‘less’ etc. It is not about the number or type of language but the amount of area and the shape of the areas in which languages are spoken. The Brazilian languages are found in **isolated patches** across central and south eastern Brazil. The Quechua language is found in **generally larger and more elongated areas** that stretch the length of Peru and into Bolivia.
- 2m 4. Study Resource Booklet Figure F2: Map of South America’s indigenous languages. Suggest **reasons for the different distributions**.
- When Brazil was invaded by the Portuguese, native people were killed or forced into small areas whilst the majority of land was taken over by the invaders.
  - The areas of the mountains (Andes) were inhospitable and unsuitable for farming or settlement and so native people were forced into these areas to survive.
  - Religion or strong traditional reasons (heritage) for living in smaller communities and areas.
- 2m 5. Suggest 2 ways in which a **local community** can preserve its **indigenous language(s)** and its **cultural heritage**.
- Educating indigenous young people in their languages in schools,
  - Preserve language materials, including audio and video recordings, dictionaries and historical documents,
  - Organising TV channels (or shows) in indigenous language,
  - Using modern (digital) technologies in using indigenous languages more broadly,
  - Organising festivities (cultural societies’ festivals and celebrations).
- 4m 6. Discuss the ways in which globalisation **negatively** influences the **environments** and **cultures of traditional societies** around the world.

Level marking:

Award higher marks (3–4) for fully-elaborated points.

Award lower marks (1–2) for non-elaborated point:

- Negative impact on environment (e.g. increased pollution of water, air, soil etc.) and increased demand for natural resources (accelerated depletion of natural resources); the dominance of popular culture can significantly modify natural environment (popular culture may be less sensitive and responsive to the diversity of local environments and can consequently generate adverse environmental impacts).
- Land grabbing – taking land from the indigenous population for development.
- Changing landscapes – uniform (more homogenous) appearance of landscape (“look-alike”) to generate “greater consumption” worldwide (fast food restaurant chains, gas stations...).
- Foreign media dominance.
- Globalisation reduces local folk customs (in clothing, music, food...) and its diversity in the world.
- Popular culture is becoming more dominant thus threatening the survival of unique folk cultures (language, religion, and ethnicity) and loss of its traditional values.