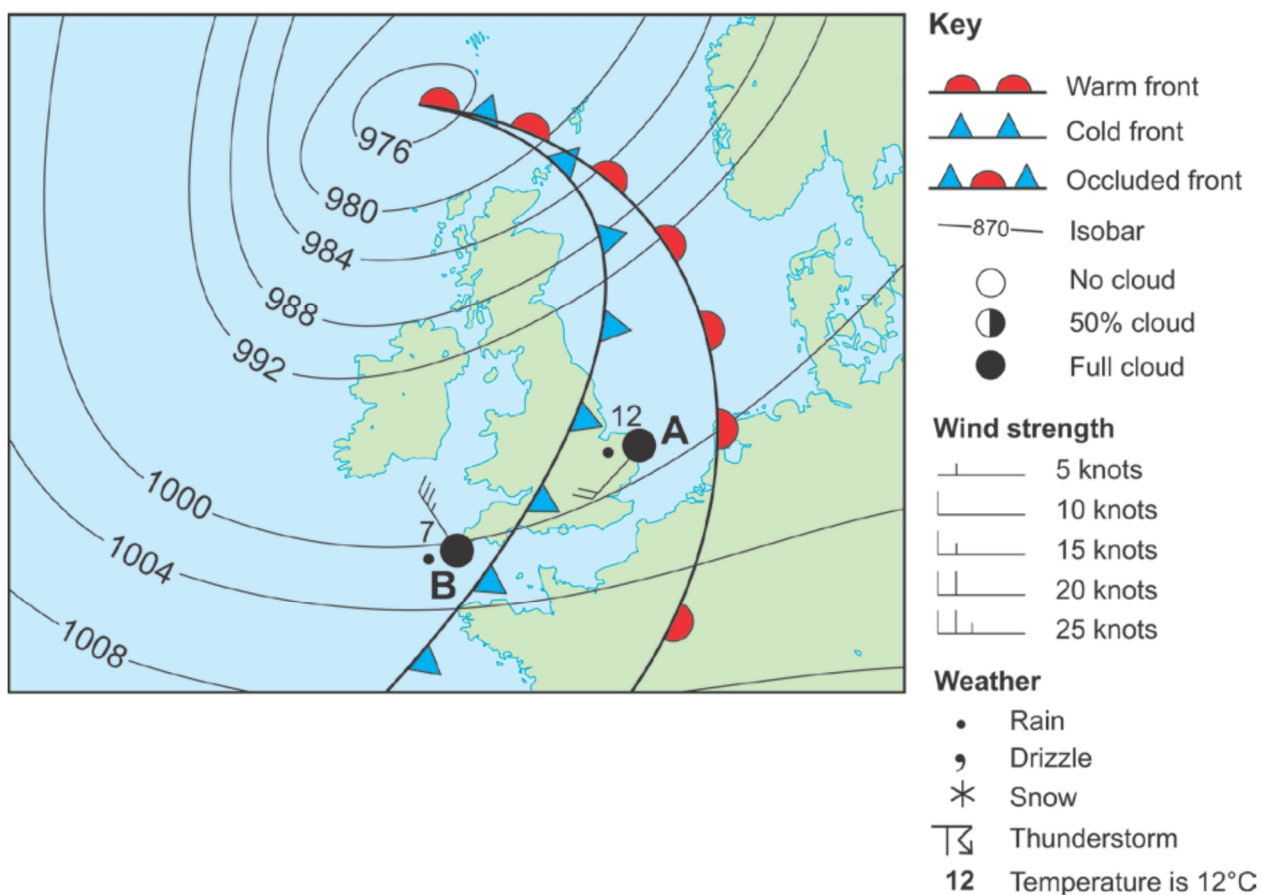


The total of all marks is 20.

1. Study Weather Map below. It shows a low pressure system (depression) over the British Isles in March 2019. Calculate the difference in temperature between the two weather stations shown on Weather Map. (max 1 mark)



Correct answer: 5°C (1 mark)

Use the key from Weather Map to complete the table below. (max 4 marks)

The wind speed at Station A was	
The amount of cloud at Station A was	
The type of precipitation falling at Station A was	
The wind direction at Station A was	

Correct answers:

The wind speed at Station A was	20 knots (1 mark)
The amount of cloud at Station A was	full cloud cover (1 mark)
The type of precipitation falling at Station A was	rain (1 mark)
The wind direction at Station A was	south west(erly) (1 mark)

Give one reason why it is raining at weather station B. (max 2 mark)

Answer option

Credit **one** valid statement for one mark, and its *elaboration* for **one** additional mark.
Warm air is forced to rise (1 mark) *by the cold front* (1 mark) *it cools* (1 mark) *moisture condenses* (1 mark)

2. Figure shows a settlement in polar environment. Study figure. Which of the following suggests that this is an extreme environment? (max 1 mark)



- A** The small settlement.
- B** The absence of industry.
- C** The pack ice in the bay.
- D** The lack of grass on the football pitch.

Which of the following is a feature of housing design in polar environments? (*max 1 mark*)

- A** Steep roof angles.
- B** Painted white to absorb heat.
- C** Large window size.
- D** Built of stone.

Outline one threat to the survival of settlements in polar environments. (*max 2 marks*)

Answer option

The question asks for an outline of one threat, so expect: basic point = changing climate threatening livelihoods/outmigration because of threat to livelihoods (1 mark); extension = detail of the reasons for the decline of settlements, e.g. reduction in fish stocks/ecosystem damage/detail of nature of climate change, e.g. loss of sea ice (1 mark).

Reject answers that are not related to polar environments.

Outline one reason why global action is necessary to protect polar environments. (*max 3 marks*)

Answer option

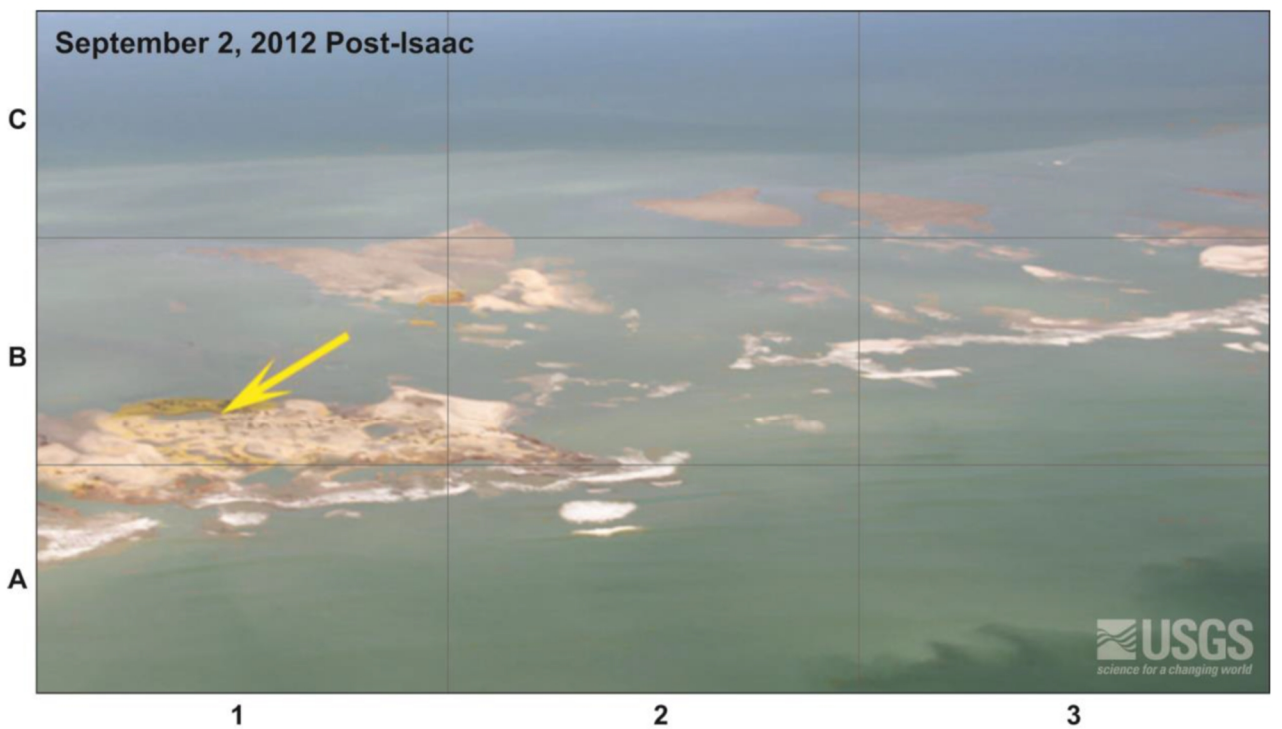
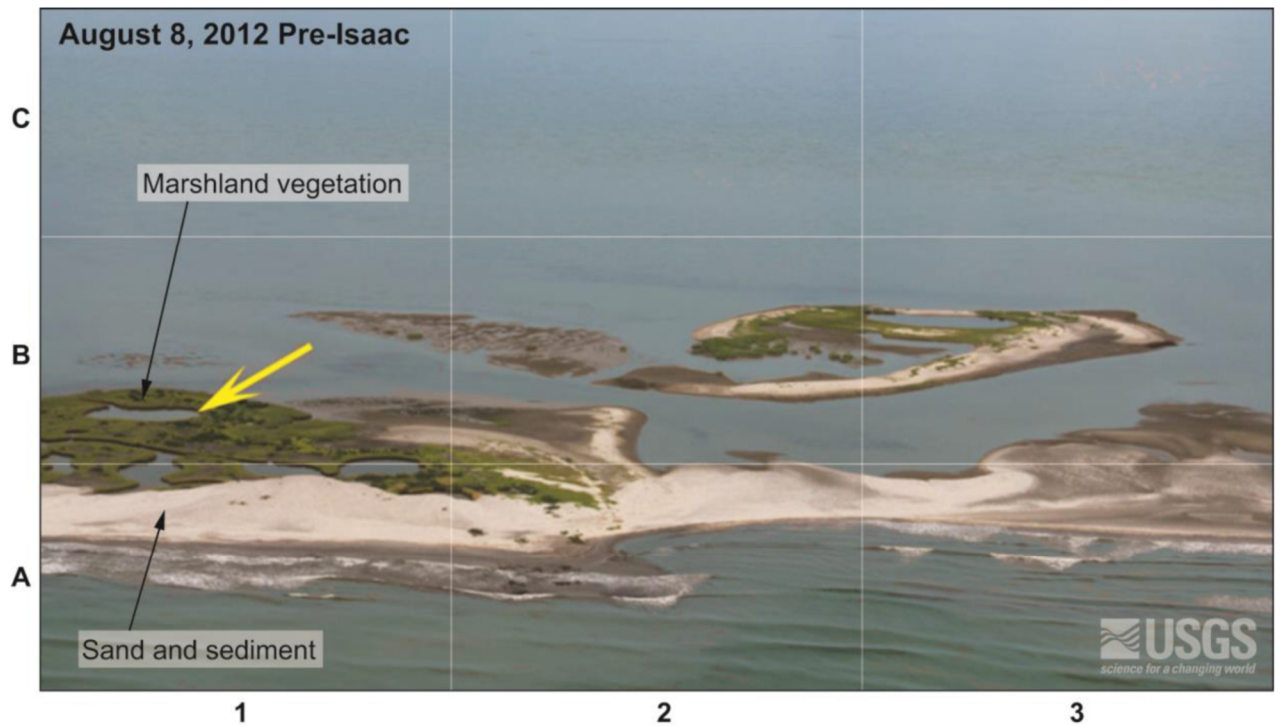
One mark for point and two marks for extension.

- Because Polar Regions (Antarctica, Arctic Ocean) are not owned by any one country (1 mark), so without international action there is no control (2 marks).
- Because what one country does will affect other countries (1 mark), example/detail of same (2 marks).
- Because of scale of threat to extreme environments (1 mark), example of the threat (2 marks).

Reject policies that are clearly not global.

3. Use figures to compare the coastal landscapes before and after the passage of Hurricane Isaac. In order to compare the coastal landscapes, both similarities and differences should be highlighted. (*max 6 marks*)

The yellow arrow in each image points to the same feature.



Chandeleur Islands, Louisiana, before and after the passage of
Hurricane Isaac (an extreme weather event)

Answer option

Similarities include:

- Both landscapes are low energy coastal environments of deposition

- Both landscapes are comprised of sand/sediment deposits

Differences include:

- More extensive, continuous and wider area of sand/sediment deposits in the foreground pre-Isaac compared to discontinuous, fragmented and smaller area of sand/sediment deposits post-Isaac
- Extensive seaward-facing areas of marshland vegetation pre-Isaac compared to the absence of marshland vegetation post-Isaac
- Lagoons to west pre-Isaac compared to loss/absence of lagoons post-Isaac
- Limited offshore deposition beyond islands pre-Isaac compared to more, but discontinuous offshore deposition in area beyond main island post-Isaac Presence of island to east in foreground pre-Isaac compared to destruction of island in east post-Isaac