(Section A:The challenge of natural hazards) Challenge Weather Hazards

Question Paper

These practice questions can be used by students and teachers and is Suitable for GCSE AQA Geography Topic Questions 8035

Course	AQA GCSE Geography
Section	1. The Challenge of Natural Hazards
Topic	1.3 Weather Hazards
Difficulty	Medium

Level: GCSE AQA 8035

Subject: Geography Exam

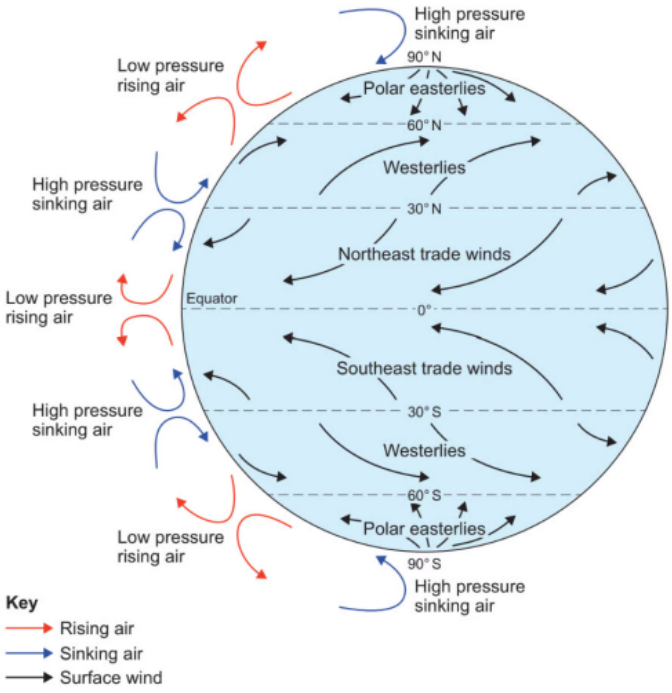
Board: GCSE AQA

Topic: Challenge of Weather Hazards

Question 1a

Study Figure 3, a diagram showing the global pattern of air pressure and surface winds.

Figure 3



(a)

Using **Figure 3**, which one of the following statements is true? Shade **one** circle only.

A. Air sinks at the Equator.

B. The southeast trade winds blow from the Equator to 30° N and S.

C. High pressure occurs where the air is sinking.

D. Polar easterlies blow from 60o N and S towards the poles.

[1 mark]

Question 1b

(b)

Using **Figure 3**, describe the link between air pressure and surface winds.

[2 mark]

Question 1c

(c)

Suggest why areas close to the Equator usually have high rainfall. Use **Figure 3** and your own understanding.

[2 mark]

Question 2

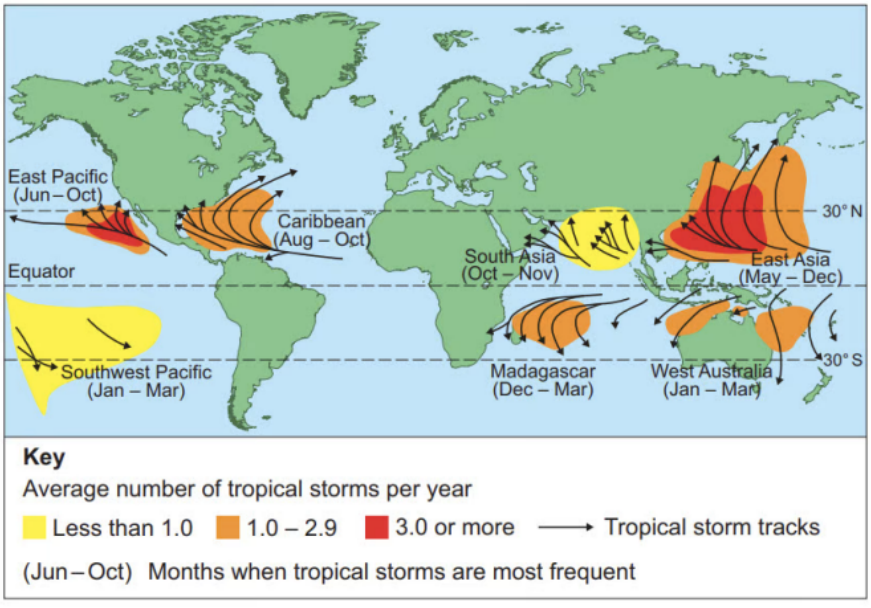
State what is meant by extreme weather.

[1 mark]

Question 3a

Study **Figure 3**, a map showing the distribution and frequency of tropical storms.

Figure 3



(a)

Using **Figure 3**, complete the following paragraph.

Most tropical storms happen between latitudes 5 degrees and 30 degrees north and south of the _____. On average, three or more tropical storms per year take place in the East Pacific and _____. In the Caribbean the main months for tropical storms are between _____.

[3 mark]

Question 3b

(b)

Give two reasons why tropical storms form in the areas shown in **Figure 3**.

[2 mark]

Question 4a

(a)

Which **one** of the following statements about tropical storms is true? Shade **one** circle only.

A. Tropical storms gain energy as they reach land.

B. Tropical storms develop along the Equator.

C. Tropical storms occur in areas of high pressure.

D. Tropical storms form above oceans where temperatures are over 27 oC.

[1 mark]

Question 4b

Study **Figure 4**, a map showing the track of Hurricane Irma in September 2017.

Figure 4

Saffir-Simpson Hurricane Wind Scale

Category	**Wind speed** (km/hour)	
1	119–153	
2	154–177	
3	178–208	
4	209–251	
5	252 or higher	

(b)

Using **Figure 4**, describe the track of Hurricane Irma between 6 September 2017 and 12 September 2017.

[4 mark]

Question 4c

(c)

Using **Figure 4**, what happened to the wind speed of Hurricane Irma between 8 and 12 September 2017?

[1 mark]

Question 5

Give **one** reason why tropical storms have a seasonal pattern.

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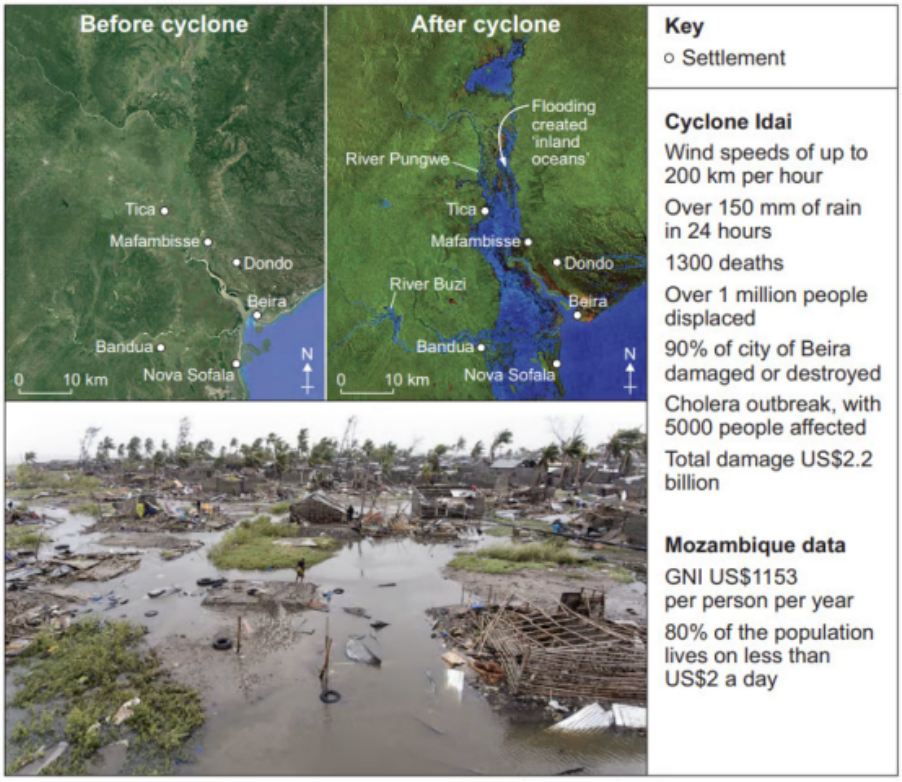
[1 mark]

Question 6

Study **Figure 3**, information about Cyclone Idai and its impacts on Mozambique.

Figure 3



Suggest why some tropical storms have severe primary and secondary effects.

Use **Figure 3** and your own understanding.

[6 mark]

Question 7

Give **one** reason why the wind speed of a tropical storm (hurricane) may change as it reaches land.

[1 mark]

Question 8

Study **Figure 5**, a news report and photograph showing the effects of Hurricane Irma on the Dutch island of Sint Maarten.

Figure 5

'Hurricane Irma hit several islands in the Caribbean on 6 September 2017, with devastating consequences for the local population. On Sint Maarten, it has so far resulted in eight deaths. Officials say that 95% of the island has been destroyed and the international airport and harbour have been seriously damaged. Power, running water and most communications have been knocked out by this powerful storm.'

Photo: Overturned shipping containers in Sint Maarten

Assess the extent to which tropical storms have effects on people and the environment. Use **Figure 5** and an example you have studied.

[9 mark]

Question 9

Which one of the following statements does not describe an extreme weather event in the UK?

A. A snow blizzard in the Midlands.

B. A heatwave in the Lake District.

C. A tornado in the Isle of Wight.

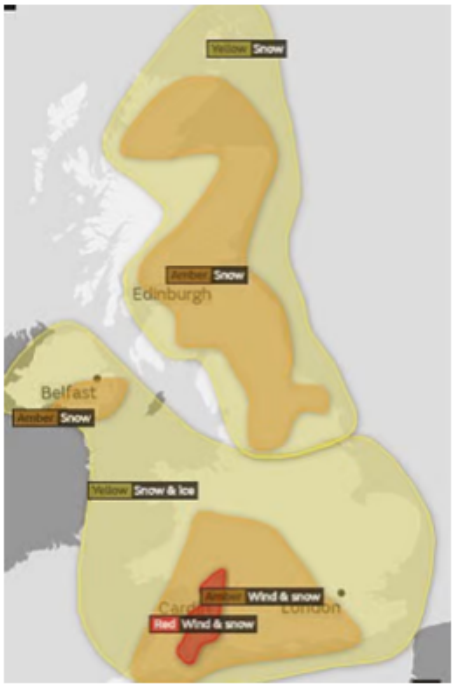
D. A wet winter in western Scotland.

[1 mark]

Question 10

Study **Figure 1**, a map showing a weather forecast for the UK on 1 March 2018.

Figure 1



Using **Figure 1**, which **one** of the following statements is true? Shade one circle only.

A. The London area has an amber snow warning.

B. The whole of the UK has a snow warning.

C. Cardiff has a red snow warning.

D. Edinburgh is not forecast to have snow.

[1 mark]

Question 11

Study **Figure 2**, information about extreme weather in the UK in the March 2018.

Figure 2

Snow warnings

Yellow:
- Some impacts
- Disrupted travel

Amber:
- Severe impacts
- Road and rail closures
- Potential risk to life and buildings

Red:
- Dangerous weather
- Risk to life
- Major disruption to travel and power supplies

'Beast from the East' causes chaos across Britain. The killer freeze costs the UK £1 billion per day as transport routes are disrupted by snow and ice. Businesses and schools are forced to close.

Suggest how extreme weather in the UK can have economic and social impacts.

Use **Figure 2** and your own understanding.

[6 mark]

Question 12

Study **Figure 4**, a table listing some of the most severe tropical storms over the past 50 years.

Tropical storm	Number of deaths	Max wind speed (km per hour)
1970 Bhola cyclone, Bangladesh	350 000	205
1975 Typhoon Nina, China	230 000	250
2008 Cyclone Nargis, Myanmar	138 000	215
1998 Hurricane Mitch, Caribbean	19 300	295
2013 Typhoon Haiyan, Philippines	7 300	310
1980 Hurricane Allen, Caribbean, Mexico and USA	260	305
2017 Hurricane Irma, Caribbean and USA	134	298

'As maximum wind speeds increase, so do the number of deaths linked to tropical storms.'

Do you agree?

Use evidence from **Figure 4** to support your answer.

[2 mark]

Question 13

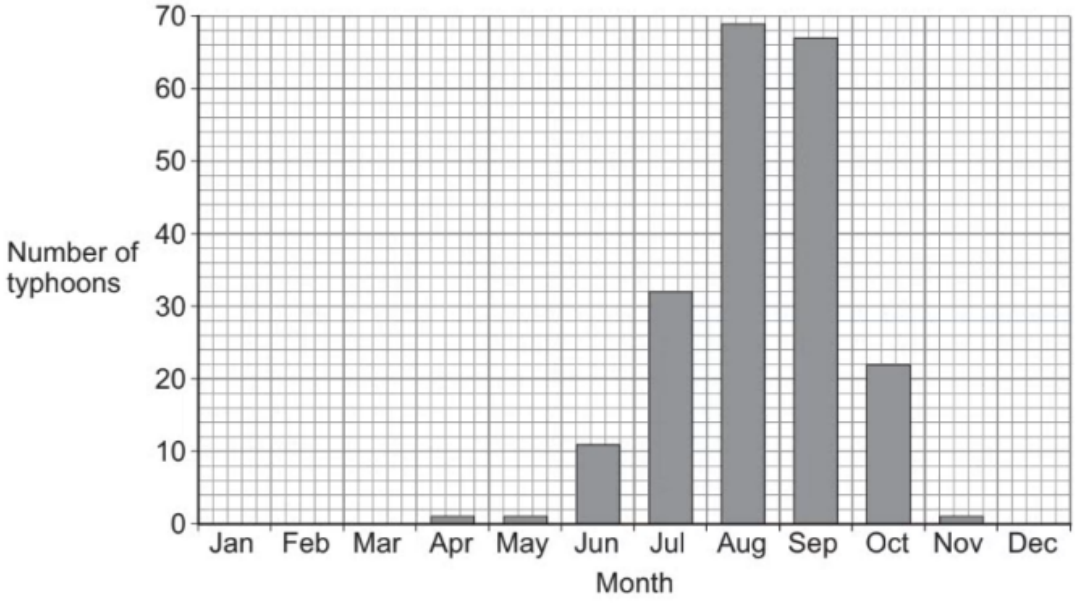
Suggest one way the distribution of tropical storms could change if global ocean temperatures continue to rise.

[2 mark]

Question 14

Study **Figure 1**, a graph showing the number of tropical storms (typhoons) that reached Japan in each month from 1851 to 2018.

Figure 1



The total number of typhoons reaching Japan was 204.

What percentage of the total number of typhoons occurred in August?

Give your answer to the nearest whole percentage.

Show your working

——----------%

[2 mark]

Question 15

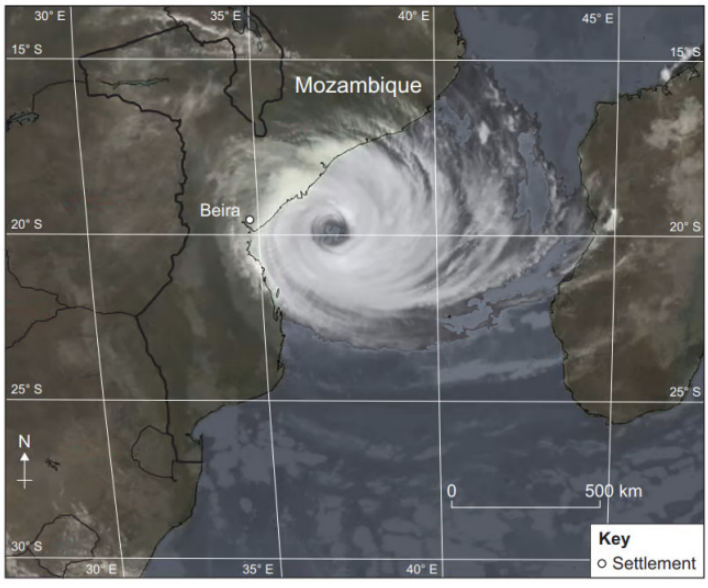
Give one reason why tropical storms have a seasonal pattern.

[1 mark]

Question 16

Study **Figure 2**, a satellite image showing Cyclone Idai approaching Mozambique, Africa in March 2019.

Figure 2



Describe the structure of Cyclone Idai shown in **Figure 2.**

[2 mark]