



Oxford Cambridge and RSA

**Wednesday 22 May 2024 – Morning**

**AS Level Geography**

**H081/02 Geographical debates**

**Time allowed: 1 hour 30 minutes**



**You must have:**

- the OCR 12-page Answer Booklet
- the Resource Booklet (inside this document)

**You can use:**

- a ruler (cm/mm)
- a scientific or graphical calculator

**INSTRUCTIONS**

- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the Answer Booklet. The question numbers must be clearly shown.
- Fill in the boxes on the front of the Answer Booklet.
- Section A: Choose **one** topic. Answer **all** the parts of the question for the topic.
- Section B: Choose **one** topic. Answer **all** the parts of the question for the topic.
- Section C: Choose **one** topic. Answer **one** question from the topic.
- Use the Resource Booklet to answer the questions in Section B.

**INFORMATION**

- The total mark for this paper is **68**.
- The marks for each question are shown in brackets [ ].
- Quality of extended response will be assessed in questions marked with an asterisk (\*).
- This document has **8** pages.

**ADVICE**

- Try to answer every part of each question you choose.
- Read each question carefully before you start your answer.

## Section A

Choose **one** topic and answer **all** the parts of the question in your chosen topic.

## Climate Change

- 1**
- (a) Explain **two** ways in which lake sediments are used to reconstruct past climate. [4]
- (b) Examine the role of natural atmospheric greenhouse gases in driving climate change in the geological past. [6]
- (c) Study **Fig. 1** which shows highest recorded air temperatures in the UK, 2015–2022.

**Fig. 1 Highest recorded air temperatures in the UK, 2015–2022**

Year	2015	2016	2017	2018	2019	2020	2021	2022
Air temperature (°C)	36.7	34.4	34.5	35.3	38.7	37.8	31.1	40.3

- (i) Using the temperature data in **Fig. 1**, calculate the value of the mean (correct to **one** decimal place) and the range. You must show your working. [4]
- (ii) Using evidence from **Fig. 1**, analyse the variation in air temperatures shown. [6]
- (d) ‘An effective response to climate change requires policies that extend beyond the vision of international directives.’  
Discuss. [12]

## Disease Dilemmas

- 2**
- (a) Explain how diseases are classified as infectious and non-infectious. [4]
- (b) Examine the role of women in combating disease risk. [6]
- (c) Study **Fig. 2** which shows prevalence of HIV among adults aged 15–49 in sub-Saharan Africa, 2021.

**Fig. 2 Prevalence of HIV among adults aged 15–49 in sub-Saharan Africa, 2021**

Country	Eswatini	Mali	South Sudan	Central African Republic	Lesotho	Sierra Leone	South Africa	Zimbabwe
Prevalence of HIV (%)	27.9	0.8	2.1	2.7	20.9	1.4	18.3	11.6

- (i) Using the HIV data in **Fig. 2**, calculate the value of the mean (correct to **one** decimal place) and the range. You must show your working. [4]
- (ii) Using evidence from **Fig. 2**, analyse the variation in prevalence of HIV shown. [6]
- (d) ‘The use of plants for medicine is not sustainable.’  
With reference to a **case study** of **one** medicinal plant, to what extent do you agree? [12]

## Exploring Oceans

- 3
- (a) Explain **two** causes of the accumulation of plastic in oceans. [4]
- (b) Examine factors that influence biodiversity in inter-tidal ecosystems. [6]
- (c) Study **Fig. 3** which shows number of pirate attacks against ships worldwide, 2014–2021.

**Fig. 3 Number of pirate attacks against ships worldwide, 2014–2021**

Year	2014	2015	2016	2017	2018	2019	2020	2021
<b>Pirate attacks</b>	245	246	191	180	201	162	195	132

- (i) Using the pirate attacks data in **Fig. 3**, calculate the value of the mean (correct to **one** decimal place) and the range. You must show your working. [4]
- (ii) Using evidence from **Fig. 3**, analyse the variation in number of pirate attacks shown. [6]
- (d) ‘The greatest impact of oil spills is on human activity.’  
With reference to a **case study** of **one** oil spill, to what extent do you agree? [12]

## Future of Food

- 4
- (a) Explain **two** ways that deforestation can impact the physical environment in attempts to increase food production. [4]
- (b) Examine how globalisation of the food industry creates inequality between transnational corporations (TNCs) and small suppliers. [6]
- (c) Study **Fig. 4** which shows percentage food security in the total population of selected countries, 2021.

**Fig. 4 Percentage food security in the total population of selected countries, 2021**

Country	Algeria	South Sudan	Japan	Laos	Haiti	Honduras	Brazil	UK
<b>Food security (% of total population)</b>	81.0	13.6	96.2	68.2	17.5	50.1	71.1	96.5

- (i) Using the food security data in **Fig. 4**, calculate the value of the mean (correct to **one** decimal place) and the range. You must show your working. [4]
- (ii) Using evidence from **Fig. 4**, analyse the variation in food security shown. [6]
- (d) ‘Food production methods used by indigenous people in an extreme environment are influenced more by ecosystems than any other physical condition.’  
To what extent do you agree? [12]

## Hazardous Earth

5

- (a) Explain **two** characteristics of shallow-focus earthquakes. [4]
- (b) Examine how the theories of continental drift and plate tectonics are supported by evidence for sea-floor spreading. [6]
- (c) Study **Fig. 5** which shows economic costs of earthquakes, estimated in 2021.

**Fig. 5 Economic costs of earthquakes, estimated in 2021**

Earthquake (year of event)	Northridge, California, USA (1994)	Kobe, Japan (1995)	Chuetsu, Japan (2004)	Sichuan, China (2008)	L'Aquila, Italy (2009)	Christchurch, NZ (2011)	Nepal (2015)	Iran/Iraq (2017)
Economic costs (\$bn)	90	350	40	186	20	48	11	7

- (i) Using the economic costs data in **Fig. 5**, calculate the value of the mean (correct to **one** decimal place) and the range. You must show your working. [4]
- (ii) Using evidence from **Fig. 5**, analyse the variation in economic costs of earthquakes shown. [6]
- (d) 'The impacts people experience as a result of volcanic eruptions are almost entirely negative.' Discuss. [12]

## Section B

Choose **one** topic and answer **all** the parts of the question in your chosen topic.

You **must** use your knowledge and understanding from across the course of study to answer these questions.

### Climate Change

6

- (a) With reference to **Fig. 6**, suggest how the role of the media in shaping the public image of climate change can influence representations of a place. [8]
- (b) Examine how the vulnerability of people to the impacts of climate change can influence flows of money and investment. [8]

### Disease Dilemmas

7

- (a) With reference to **Fig. 7**, suggest how vectors of disease influenced by physical factors might affect demographic characteristics of places at a local scale. [8]
- (b) Examine how national solutions for dealing with incidence of cancers linked to air pollution might be influenced by government spending in key services. [8]

### Exploring Oceans

8

- (a) With reference to **Fig. 8**, suggest how the global distribution of warm and cold surface currents can influence human activity in **one** type of landscape system you have studied. [8]
- (b) Examine how sea level change due to climate change might influence flows of people. [8]

### Future of Food

9

- (a) With reference to **Fig. 9**, suggest how opportunities **between** countries to ensure food security through appropriate aid are influenced by social inequality. [8]
- (b) Examine how different food production methods might influence place identity. [8]

### Hazardous Earth

10

- (a) With reference to **Fig. 10**, suggest how lava flows generated by volcanic eruptions influence socio-economic characteristics of places at a local scale. [8]
- (b) Examine how the features and processes associated with conservative plate boundaries might influence people's perceptions of place. [8]

### Section C

Choose **one** topic and answer **one** question in your chosen topic.

#### Climate Change

- 11\* 'Mitigation of risks of climate change can be effective only if political challenges are overcome.'  
To what extent do you agree? [20]

Or

- 12\* Evaluate the contribution of advanced countries (ACs) to anthropogenic greenhouse gas emissions over time. [20]

#### Disease Dilemmas

- 13\* 'Disease outbreaks influenced by natural hazards have only short-term impacts on resident populations.'  
With reference to a **case study** of **one** country, to what extent do you agree? [20]

Or

- 14\* 'The main causes of non-communicable diseases are cultural.'  
Discuss. [20]

#### Exploring Oceans

- 15\* 'Sustainable use of biological resources within oceans depends on the attitudes of stakeholders.'  
With reference to a **case study**, to what extent do you agree? [20]

Or

- 16\* 'The changing geography of the Arctic region can be managed effectively only through international organisations.'  
Discuss. [20]

#### Future of Food

- 17\* 'Food security issues are caused mainly by human factors.'  
With reference to a **case study** of **one** place, to what extent do you agree? [20]

Or

- 18\* 'The impact of poor food security on the lives of people depends on a place's level of economic development.'  
Discuss. [20]

**Hazardous Earth**

**19\*** 'The risks from tectonic hazards have increased over time.'  
Discuss. **[20]**

**Or**

**20\*** 'The effectiveness of strategies used to cope with volcanic activity depends on a country's level of economic development.'  
To what extent do you agree? **[20]**

**END OF QUESTION PAPER**

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