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.

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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]**

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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
Pirate attacks	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
Food security (% of total population)	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]**

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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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