



SUBJECT:	<b>Geography</b>
PAPER NUMBER:	I
DATE:	17 <sup>th</sup> May 2023
TIME:	9:00 a.m. to 12:05 p.m.

Answer **FOUR** questions in total. Questions carry 25 marks each.

1. (a) With the help of annotated diagrams, describe the physical processes which are responsible for the development of the **THREE** main types of rainfall. (15)
- (b) With reference to Figure 1, discuss the global patterns of rainfall and provide reasons for the development of these patterns. (10)

**(Total: 25 marks)**

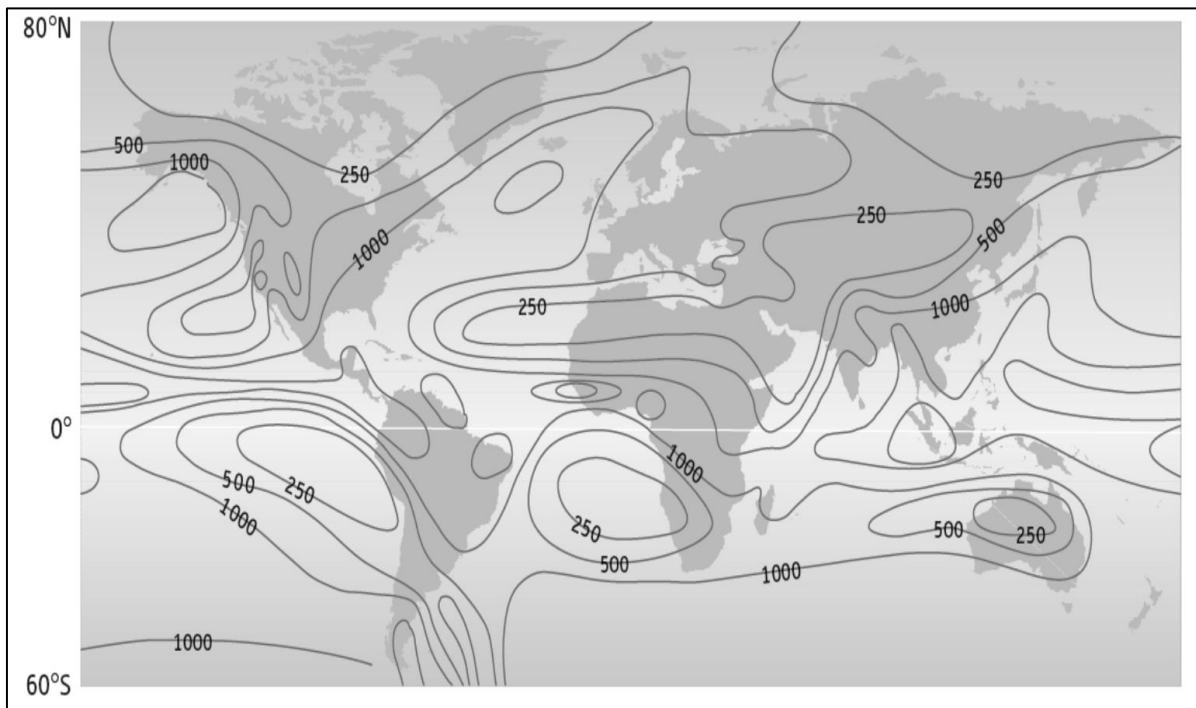


Figure 1: Global distribution of annual rainfall (mm), simplified to show only major regimes; oceanic rainfall estimated.  
(Source: after Riehl, 1965)

2. (a) Define 'soil catena'. (5)
- (b) With reference to Figure 2, discuss the influence of altitude, drainage and slopes on soil development. (20)

(Total: 25 marks)

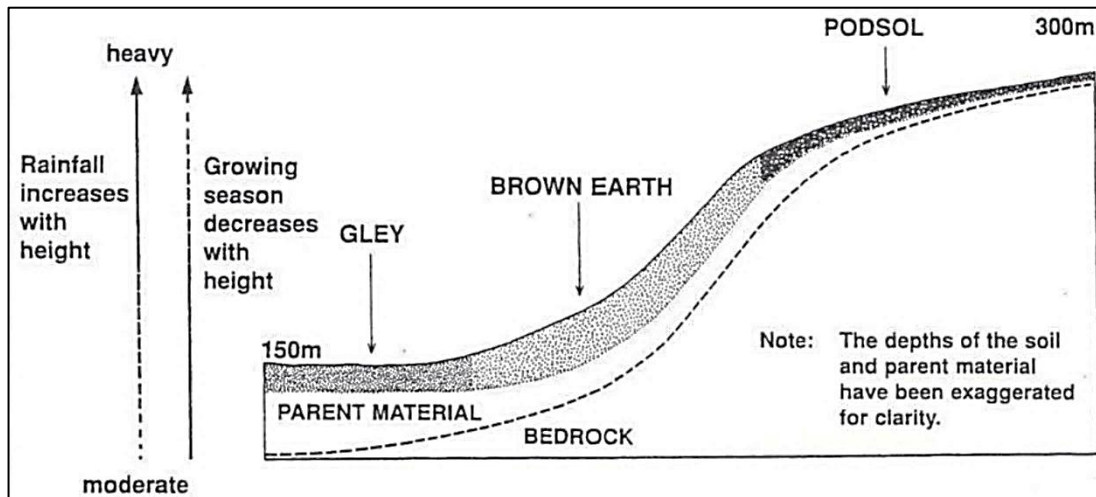


Figure 2: Soil formation on slopes.  
 (Source: Adapted from <https://slideplayer.com/slide/9147014/>)

3. The cafe at the Birling Gap National Trust visitor centre in Sussex (UK) has been relocated to the rear of the building. The move was made because of a recent cliff collapse. (Sussex News, 2023)

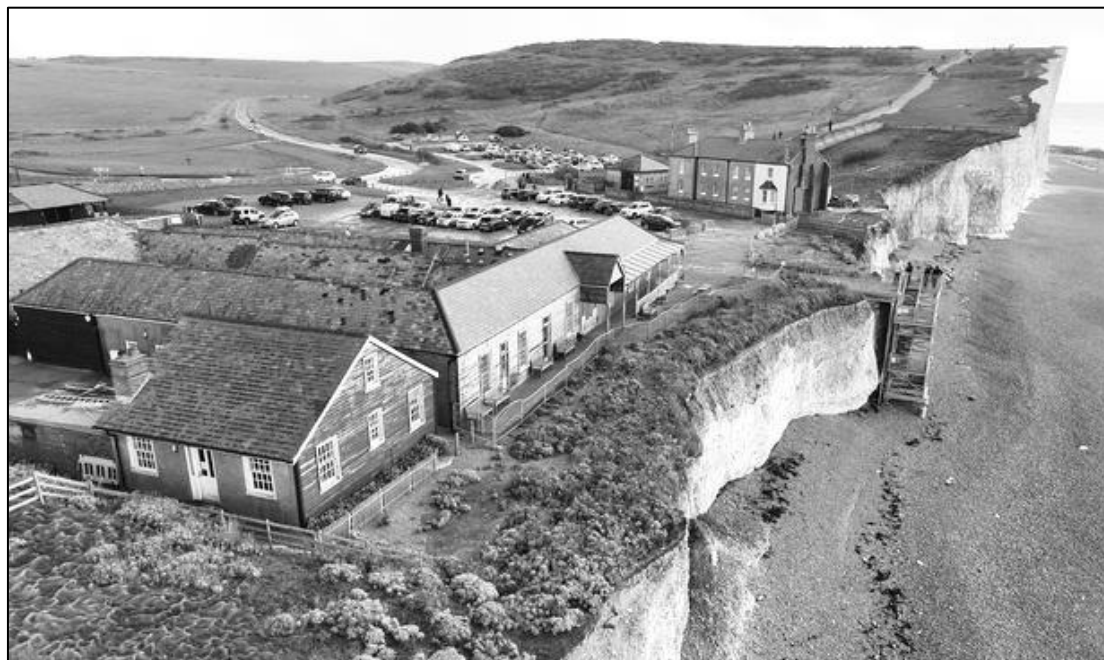


Figure 3: Birling Gap National Trust visitor centre in Sussex (UK)  
 (Source: Adapted from [sussexexpress.co.uk](http://sussexexpress.co.uk))

- (a) Explain the rocky coast processes that contribute to cliff retreat and collapse. (15)
- (b) The rate of erosion along a cliff profile depends on a number of controlling factors. Explain **TWO** of these controlling factors. (10)

(Total: 25 marks)

4. (a) Flood-intensifying conditions in the drainage basin may change the basin's response to a storm. Outline **FIVE** human-induced activities that may increase the risks of flooding in a basin. (10)
- (b) You have been asked to undertake a flood hazard assessment in a river town. Explain **FIVE** field methods that would help you carry out such an investigation. (15)

**(Total: 25 marks)**

5. (a) With reference to **ONE** named example of a location, describe and account for:
- (i) the climate and nutrient cycling of a tropical rainforest biome; (10)
  - (ii) the climate and vegetation adaptations of savanna grasslands. (10)
- (b) Identify the major environmental threats to the tropical rainforest of **ONE** named region/country of your choice. (5)

**(Total: 25 marks)**

6. Climate change is affecting the Maltese Islands in various ways. Discuss how climate change will increasingly impact the following:
- (a) ambient air temperature; (9)
  - (b) rainfall patterns; (8)
  - (c) sea temperatures. (8)

**(Total: 25 marks)**

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SUBJECT: **Geography**  
 PAPER NUMBER: II  
 DATE: 19<sup>th</sup> May 2023  
 TIME: 9:00 a.m. to 12:05 p.m.

Answer **FOUR** questions in total. Questions carry 25 marks each.

1. Figure 1 is a choropleth map showing the global population density by country in 2022.

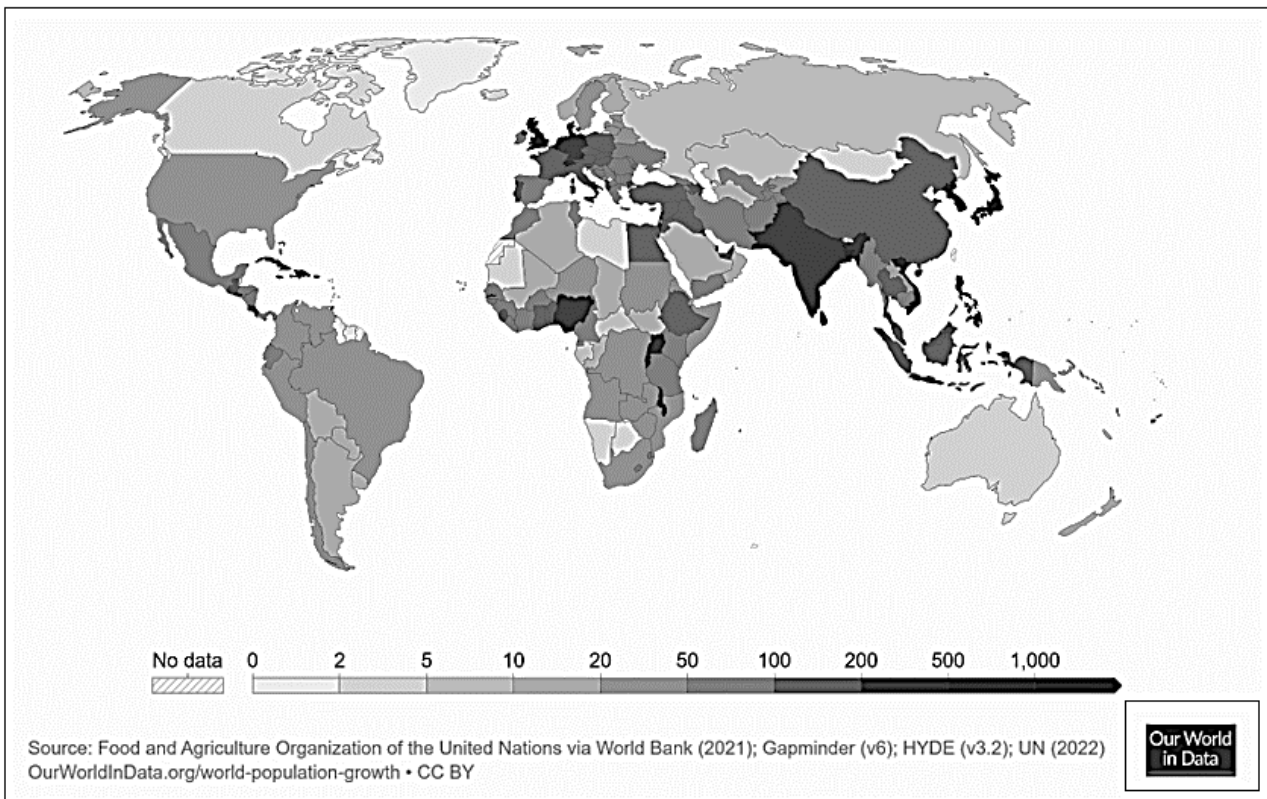


Figure 1: Global population density in 2022  
(Source: <https://ourworldindata.org>)

- (a) Describe the global population density as illustrated in Figure 1. (5)
- (b) Discuss **TWO** physical and **TWO** human factors which influence the distribution of the world's population. (12)
- (c) Malta is the most densely populated country in the European Union (EU). Discuss the relationship between population density and population distribution in the Maltese Islands. (8)

**(Total: 25 marks)**

2. Agriculture dominates the planet. Yet it has many environmental costs that are unsustainable, especially as global food demand rises." (Tanentzap et al., 2015)

(a) Discuss **THREE** environmental impacts of agricultural activities. (9)

(b) List and briefly describe **THREE** problems related to irrigation in arid and semi-arid regions. (6)

(c) A theory which looks at the relationship between population growth and food supply resources is the Malthus Theory. Discuss this statement and include an annotated diagram in your answer. (10)

**(Total: 25 marks)**

3. Limestone quarrying has sustained the Maltese building industry for centuries; however the environmental and health impacts of quarrying activities are significant.

(a) Describe the **TWO** types of quarrying that take place in the Maltese Islands and state the uses of **each** type. (8)

(b) Discuss **THREE** negative impacts of the quarrying industry. (9)

(c) Outline **FOUR** sustainable uses for disused quarries in the Maltese Islands. (8)

**(Total: 25 marks)**

4. The Brandt Report (1980) provided an understanding of the discrepancies in economic development between the Northern and Southern Hemisphere.

(a) Explain the differences in characteristics of the Northern and Southern hemispheres as identified in the Brandt Report. (8)

(b) Describe the relevance of the North-South divide in the contemporary world. (5)

(c) The Brandt Report recognised the need to increase international trade between the North and South.

(i) Describe the North-South trade relations. (6)

(ii) Explain the term 'fair trade'. (6)

**(Total: 25 marks)**

5. Figure 2 consists of a line graph showing the changes in the global urban and rural populations, in less developed and more developed regions for the period 1950–2050.

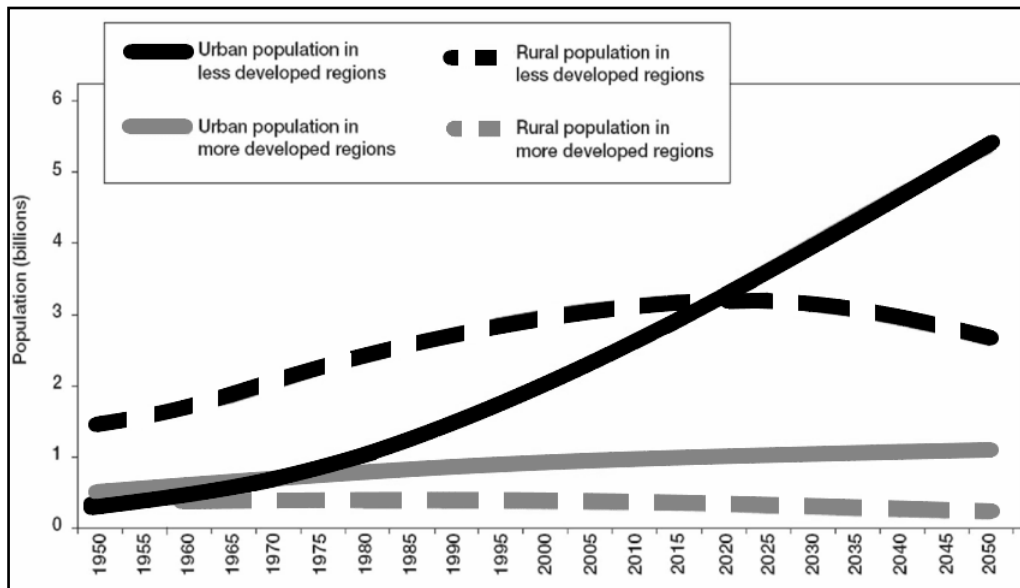


Figure 2: Urban and rural population growth for the more developed and less developed regions, 1950–2050 (Source: adapted from Elhadary, 2011)

- (a) Explain how the rural and urban population of less economically developed and more economically developed regions changed over time as shown in Figure 2. (9)
- (b) Discuss **TWO** causes of urban growth and **TWO** causes of urban decline in less economically developed countries (LEDCs). (8)
- (c) The United Nations classifies less developed countries with the lowest indicators of socio-economic development. Name and describe **TWO** social and/or economic criteria that are used to identify less economically developed countries. (8)

**(Total: 25 marks)**

6. Malta is a small island with few natural resources and no domestic resources of fossil fuels for the production of energy.

- (a) Discuss the lack of natural resources in Malta, with particular reference to energy resources. (7)
- (b) Although Malta possessed the capacity for coal generation from 1980 until 1996, oil has been the primary fuel for electricity generation for many decades before 2015. Explain the recent changes (post 2015) in electricity generation in the Maltese islands. (8)
- (c) Discuss the role of **TWO** types of renewable energy sources in the energy diversification strategy of the Maltese Islands. (10)

**(Total: 25 marks)**