GCE A LEVEL

A110U20-1

S23-A110U20-1

TUESDAY, 6 JUNE 2023 – MORNING

GEOGRAPHY – A level component 2
Global Systems and Global Governance

2 hours

A110U201
01

ADDITIONAL MATERIALS

A WJEC pink 16-page answer booklet.
A calculator.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

Write your answers in the separate answer booklet provided.

Write your name, centre number and candidate number in the spaces at the top of the answer booklet.

Answer questions 1 **and** 2 and **either** 3 **or** 4 in Section A.

Answer questions 5 **and** 6 and **either** 7 **or** 8 in Section B.

Answer **one** question in Section C.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets [ ] at the end of each question or part-question; you are advised to divide your time accordingly.

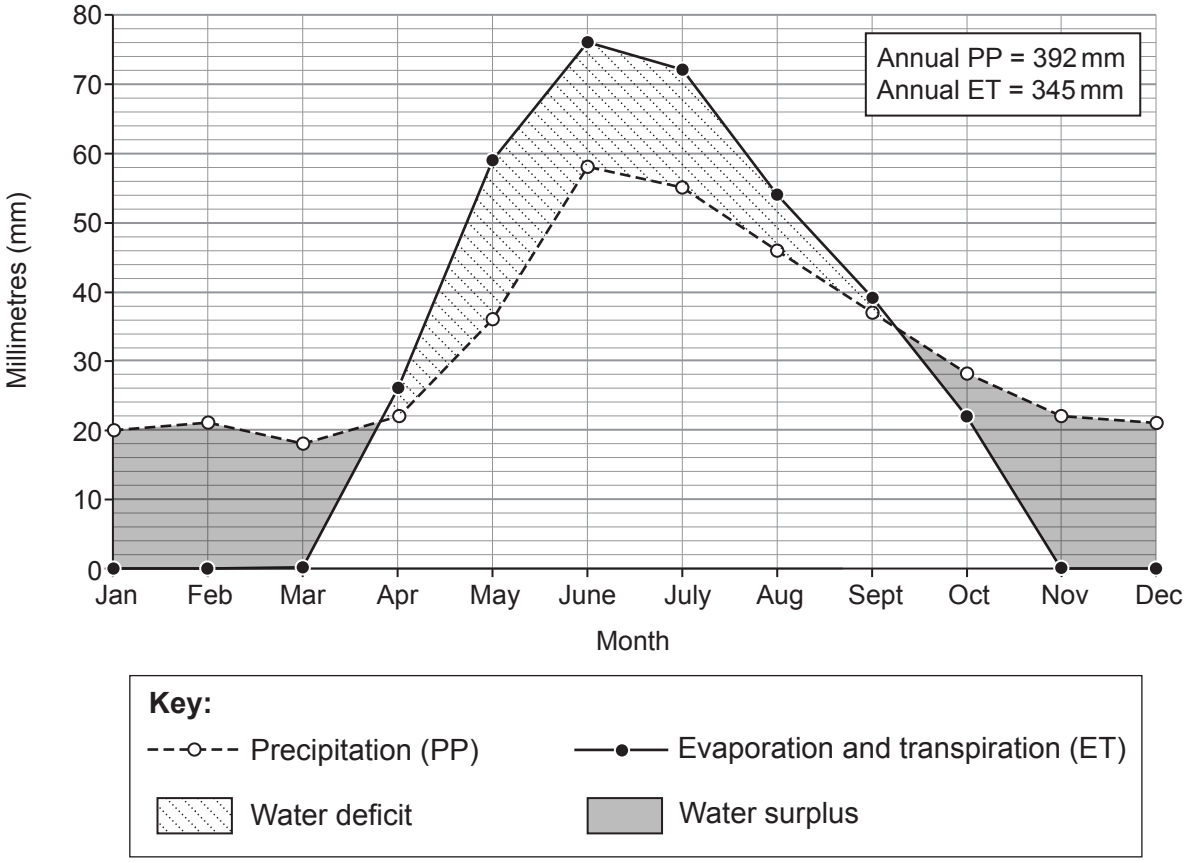
This paper requires that you make as full use as possible of appropriate examples and reference to data to support your answers. Sketch maps and diagrams should be included where relevant.

Section A: Global Systems – Water and Carbon Cycles

Answer questions 1 **and** 2 and **either** 3 **or** 4.

Make the fullest possible use of examples in support of your answers.

Figure 1: Precipitation, evaporation and transpiration data for an area of northern Canada



Adapted from: *https://www.researchgate.net/*

1. (a) (i) Use **Figure 1** to state the water surplus in millimetres for October.

Write the answer in your booklet. [1]

(ii) Use **Figure 1** to identify the month with the greatest water deficit.

Write the answer in your booklet. [1]

(iii) Use **Figure 1** to describe the annual pattern of precipitation (PP). [3]

(iv) Suggest reasons why evaporation and transpiration (ET) exceed precipitation (PP) for part of the year in **Figure 1**. [5]

Figure 2a and Figure 2b: Climate and peatland maps for Great Britain

Figure 2a

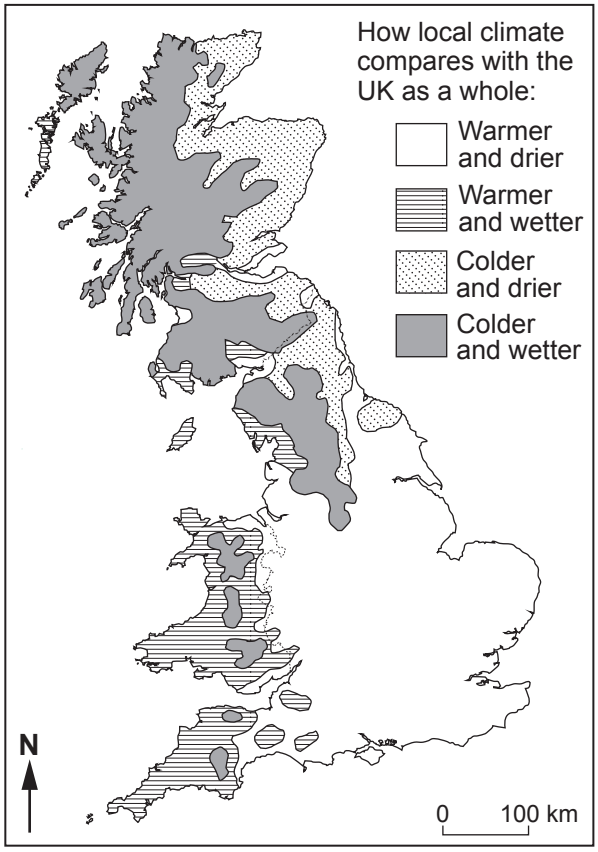
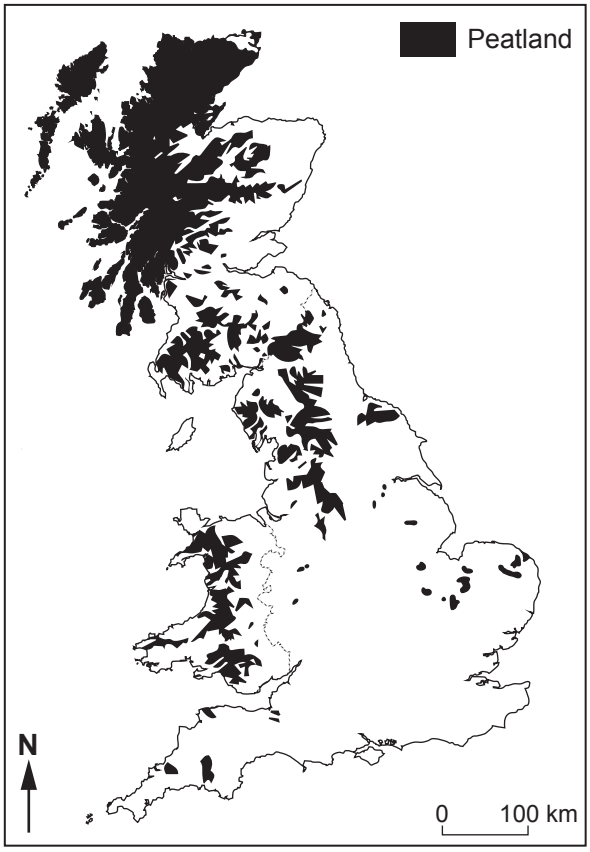


Figure 2b



Adapted from: *https://ur.booksc.eu/book/37501852/e41ad3*

2. (a) Use **Figures 2a** and **2b** to analyse the relationship between local climate and peatland distribution in Great Britain. [5]

(b) Explain how peat formation is influenced by physical factors other than climate. [5]

Either,

3. 'The water and carbon that are stored in rocks only play very minor roles in supporting human life.' Discuss. [20]

Or,

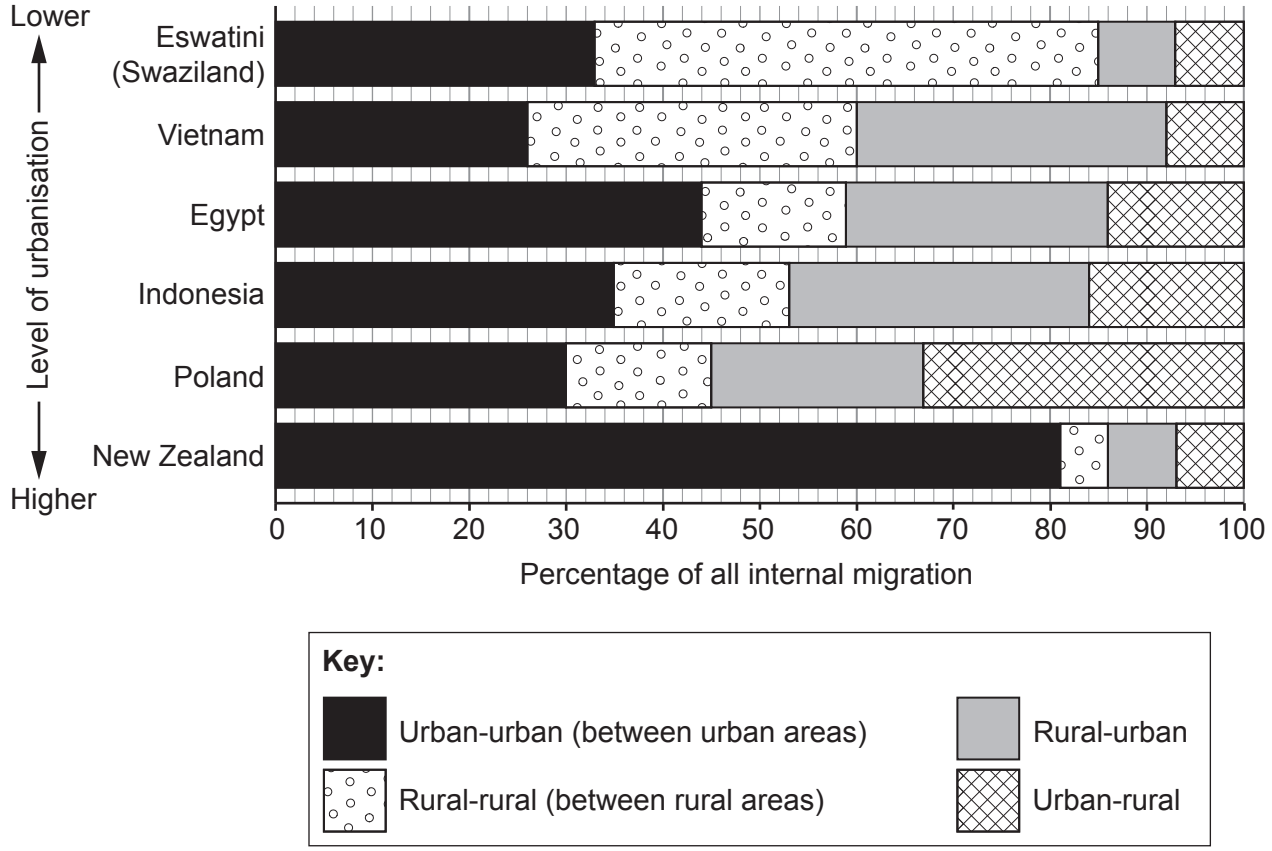
4. 'Land-use changes always affect local water and carbon cycles in highly negative ways.' Discuss. [20]

Section B: Global Governance – Change and Challenges

Answer questions 5 **and** 6 and **either** 7 **or** 8.

Make the fullest possible use of examples in support of your answers.

Figure 3: The relative importance of different types of internal migration for selected countries with varying levels of urbanisation



Adapted from: *https://www.researchgate.net* and *https://onlinelibrary.wiley.com*

5. (a) (i) Use **Figure 3** to state the percentage value of **urban-urban** migration for Egypt.

Write the answer in your booklet. [1]

(ii) Describe variations in the relative importance of **rural-rural** migration for the countries shown in **Figure 3**. [4]

(iii) Suggest why the relative importance of **rural-urban** migration varies for the countries shown in **Figure 3**. [5]

Figure 4: Numbers of containers handled by the world's ten busiest container ports, 2005 and 2019

2005			2019		
Rank	**Port**	**Number of containers handled (million TEU*)**	**Rank**	**Port**	**Number of containers handled (million TEU*)**
1	Singapore ★	23	1	Shanghai ★	43
2	Hong Kong ★	22	2	Singapore ★	37
3	Shanghai ★	18	3	Ningbo ★	27
4	Shenzhen ★	16	4	Shenzhen ★	26
5	Busan ★	12	5	Guangzhou ★	23
6	Kaohsiung ★	9	6	Busan ★	22
7	Rotterdam ●	9	7	Qingdao ★	21
8	Hamburg ●	8	8	Hong Kong ★	18
9	Dubai ◆	7	9	Tianjin ★	17
10	Los Angeles ▲	7	10	Rotterdam ●	14

*1 TEU = one twenty-foot-long (6-metre) equivalent container unit

Key: ★Asia ●Europe ◆Middle East ▲North America

Adapted from: *www.statista.com and www.bimco.org*

6. (a) Use **Figure 4** to analyse the changing size and importance of Asian container ports. [5]

(b) Outline **two** ways in which shipping movements are regulated by global agreements. [5]

Either,

7. Evaluate the severity of different risks created by the growth of international shipping and communications networks.

Refer to both ocean governance and migration in your answer. [20]

Or,

8. Evaluate ways in which the UK's present-day international relationships are influenced by Commonwealth and former colonial links.

Refer to both migration and ocean governance in your answer. [20]

Section C: 21st Century Challenges

Answer **either** question 9 **or** question 10.

In your answer to either question 9 **or** 10, you should use **Figures 5**, **6**, **7** and **8** and apply your knowledge and understanding from across the whole specification.

Either,

9. 'Climate change will soon become the main driver of all international migration.' Discuss. [30]

Or,

10. 'We can still stop climate change from causing permanent harm to societies and environments.' Discuss. [30]

Figure 5: Projected climate change impacts on different landscape systems

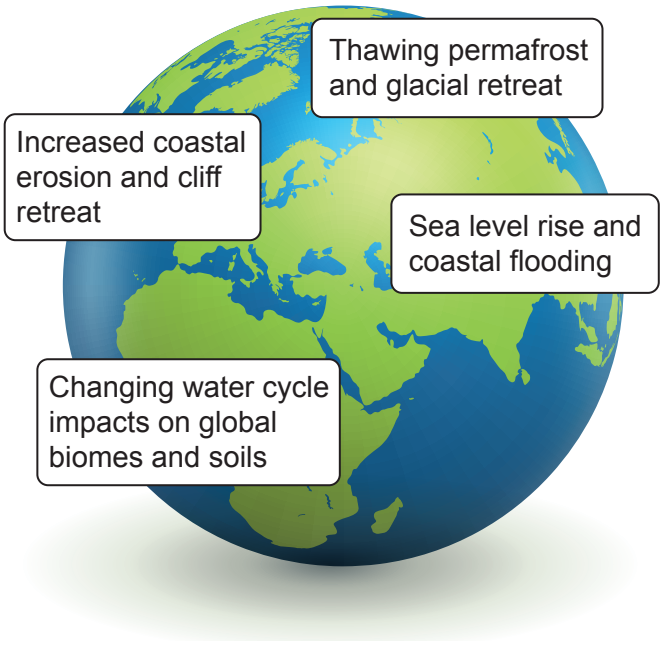


Figure 6: Environmental and human causes of refugee movements

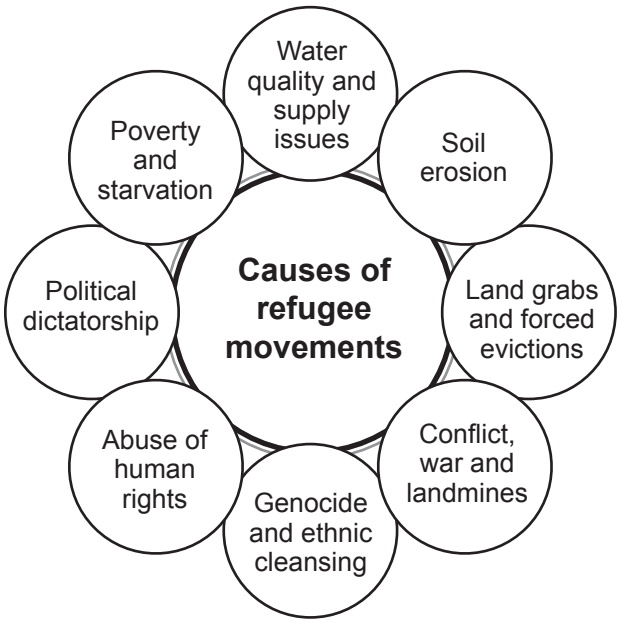
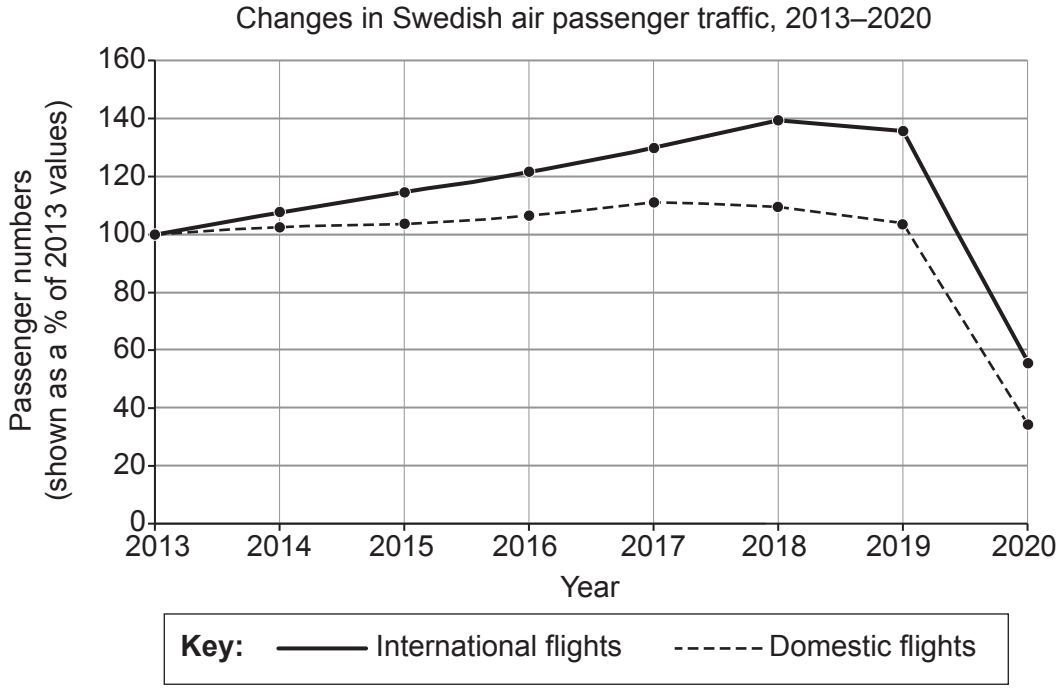


Figure 7: Evidence that more people may be choosing not to fly for environmental reasons

- The global 'no-fly' movement began in Sweden. 'Flygskam' (flight shame) describes people's negative feelings about the climatic impact of air travel.
- Decline in the growth rate of Swedish air travel was first noticed in 2018.
- Many well-known Swedes, including Greta Thunberg, support the campaign.



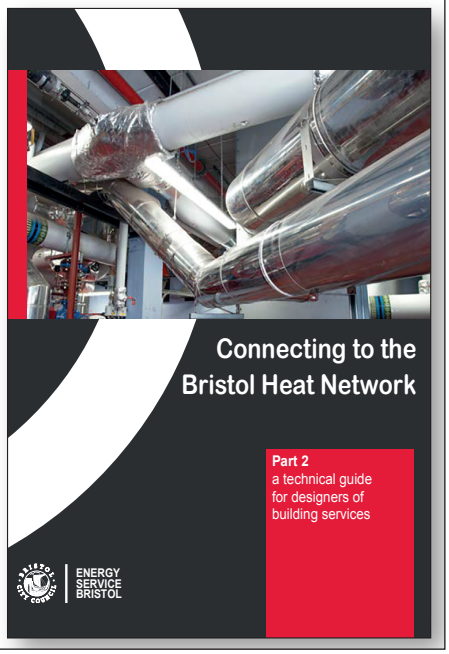
Source: *https://www.economist.com/graphic-detail/2019/08/19/the-greta-effect*

Figure 8: Climate innovation clusters

Climate innovation clusters are made up of quaternary industries, research organisations and government agencies.

- Locations for climate innovation clusters include London, Cambridge, Bristol and Edinburgh.
- The Bristol Temple Quarter Enterprise Zone is a cluster of small and medium-sized enterprises specialising in low-carbon heat networks and other technologies.

A joint research report by local businesses and Bristol City Council. The focus is a planned network of underground pipes delivering low-carbon heat across the city. →



Adapted from: *www.sustainabilitywestmidlands.org.uk* and *www.energyservicebristol.co.uk*

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