

## MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD

# ADVANCED MATRICULATION LEVEL 2019 FIRST SESSION

SUBJECT: Geography

PAPER NUMBER:

DATE: 20<sup>th</sup> May 2019

TIME: 9:00 a.m. to 12:05 p.m.

Answer FOUR questions in total. Questions carry equal marks.

1. Figure 1 shows the actual value of precipitation in the UK over eight days in November 2012.

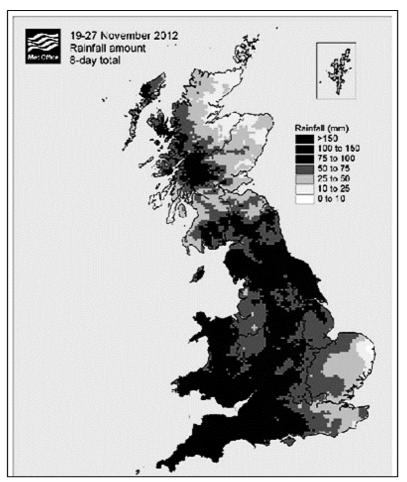


Figure 1: Actual value of precipitation in the UK over eight days in November 2012. (adapted from: https://metofficenews.files.wordpress.com)

(a) Outline the key findings of Figure 1.

(4 marks)

(b) With reference to your answer in question (a), describe the main factors that cause some places to get more precipitation than others in the UK. (4 marks)

#### Question continue on next page

- (c) Choose **ONE** type of high clouds and **ONE** type of low clouds and explain their key characteristics and the precipitation associated with them. (4 marks)
- (d) Explain the key characteristics of orographic rainfall. Include a diagram to illustrate your answer. (5 marks)
- (e) Discuss how global warming is affecting global patterns of precipitation. (8 marks)
- 2. Earth was once a supercontinent, called 'Pangaea', but over time continents have drifted apart to form the present day configuration.
  - (a) Explain the 'Theory of Continental Drift'. Include a diagram to illustrate your answer.

    (10 marks)
  - (b) Describe in detail **THREE** types of evidence that support the 'Theory of Continental Drift'. (15 marks)
- 3. Coastal erosion is often defined as the loss of coastal lands due to the net removal of sediments or bedrock from the shoreline (United Nations Office for Disaster Risk Reduction, 2017).
  - (a) Explain **THREE** processes of coastal erosion. (6 marks)
  - (b) Using a diagram/diagrams to support your answer, explain the role of erosion in the formation of caves, blowholes, arches and stacks. (11 marks)
  - (c) Discuss **FOUR** ways how coasts and/or cliffs can be protected from erosion. (8 marks)

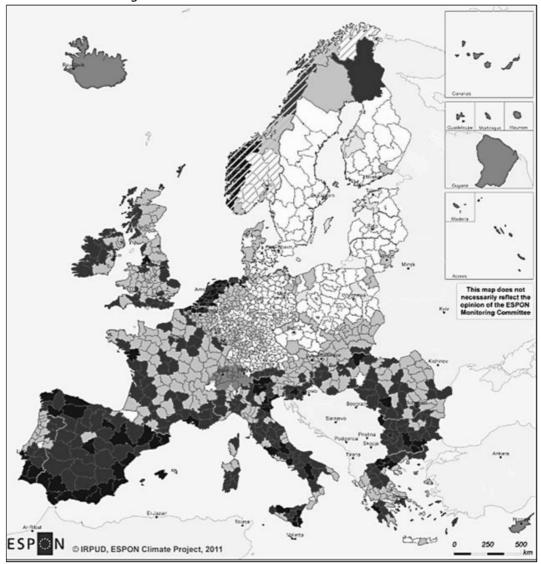
4. Figure 2 shows the Amazon River; it is the world's largest river by volume and contains 20% of earth's fresh water (Malewar, 2017).



Figure 2: The Amazon River (Malewar, 2017)

- (a) With the help of a labelled diagram, explain the **TWO** patterns of flow in a river. (10 marks)
- (b) Describe **THREE** factors that influence the velocity of a river. (15 marks)
- 5. Malta's economic growth is projected to remain robust until 2020 (European Economic Forecast, 2018). Worldwide, the recurring questions revolve around the imbalance between the economy, the environment, and society the economy is failing the environment, and humanity (World Economic Forum, 2019). This failing situation is also visible in Malta with the degradation of habitats and loss of biodiversity (MEPA, 2014).
  - (a) Discuss how both a robust economy and a healthy environment, that includes thriving habitats and healthy biodiversity, are important for Malta. (13 marks)
  - (b) Explain **THREE** policy initiatives that can help reduce the degradation of habitats and loss of biodiversity in Malta. (12 marks)

6. Figure 3 is a map showing the aggregated potential impact of climate change in Europe. The impacts are a weighted combination of physical, environmental, social and cultural potential impacts of climate change.



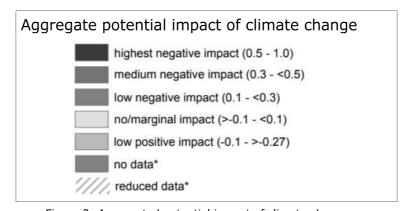


Figure 3: Aggregated potential impact of climate change (https://www.espon.eu/sites/)

- (a) Outline the key findings of Figure 3. (4 marks)
- (b) Discuss **TWO** important human factors contributing to climate change. (5 marks)
- (c) Discuss **FOUR** ways how climate change is affecting coastal environments. (8 marks)
- (d) Describe **FOUR** adaptation practices that could minimise the impacts of climate change on coastal environments. (8 marks)



### MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD

### ADVANCED MATRICULATION LEVEL 2019 FIRST SESSION

SUBJECT: Geography

PAPER NUMBER: II

DATE: 21<sup>st</sup> May 2019

TIME: 9:00 a.m. to 12:05 p.m.

Answer FOUR questions in total. Questions carry equal marks.

1. Figure 1 is a representation of the relationship between transport and land use.

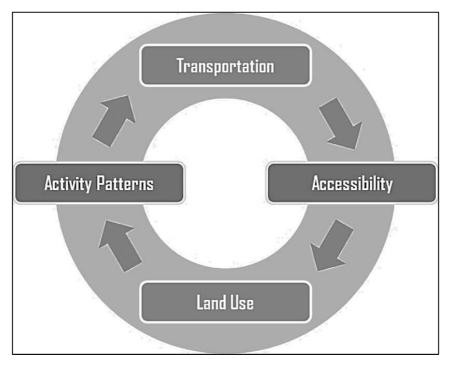
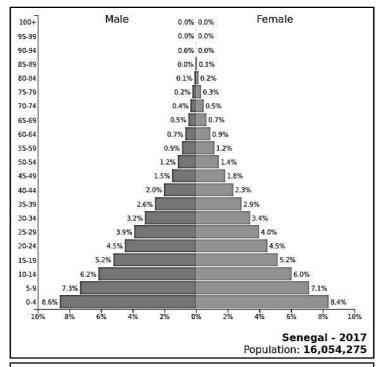


Figure 1: The relationship between transport and land use (https://transportgeography.org/)

(a) Describe the main concepts shown in Figure 1.

- (5 marks)
- (b) With reference to your answer for question (a) briefly discuss how the relationship between transport and land use evolved in Malta in recent years. Illustrate your answer with examples. (10 marks)
- (c) Describe **FIVE** ways how Malta can strive towards a sustainable urban mobility plan. (10 marks)

2. Figure 2 shows two population pyramids for Senegal and Malta in 2017.



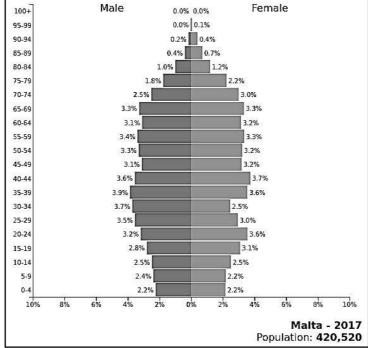


Figure 2: Population pyramids for Senegal and Malta in 2017 (https://www.populationpyramid.net/)

- (a) Define population pyramids. Outline what data they represent and why they are useful. (4 marks)
- (b) With reference to Figure 2, discuss the population pyramids for Malta and Senegal in 2017. (12 marks)
- (c) Discuss **TWO** positive and **ONE** negative effects of the current demographic profile in Malta. (9 marks)

3. Figure 3 shows the 17 Sustainable Development Goals (SDGs) for 2030. The second goal, 'Zero Hunger', targets ending hunger, achieving food security, improve nutrition and promote sustainable agriculture (United Nations, 2019).



Figure 3: The 17 Sustainable Development Goals for 2030 (United Nations, 2019)

- (a) Famine happens when hunger is concentrated and catastrophic. Briefly explain **TWO** causes of famine on a worldwide scale. (5 marks)
- (b) Discuss **TWO** unsustainable agricultural practices that can have a negative effect on food security. Support your answer with examples. (8 marks)
- (c) "Over the centuries, indigenous peoples have provided a series of ecological and cultural services to humankind. The preservation of traditional forms of farming knowledge and practices help maintain biodiversity and enhance food security". (https://www.resilience.org). Explain **THREE** indigenous agricultural practices that enhance food security. (12 marks)
- 4. The Conference of Parties (COP) 21 that took place in Paris, France in 2015 was a landmark meeting for the United Nations Framework Convention on Climate Change (UNFCCC). The Paris Agreement was reached during COP 21 (UNFCCC, 2019).
  - (a) What is the Paris Agreement? (5 marks)
  - (b) Describe **TWO** ways in which countries can contribute to achieve the Paris Agreement. (10 marks)
  - (c) In 2018 (three years after the landmark meeting in Paris), during COP 24, negotiations regarding the Paris Agreement were still being discussed. Overall, COP 24 was a success but striking the perfect balance between different countries can lead to several issues. Explain **TWO** major issues faced by countries to achieve the Paris Agreement.

    (10 marks)

- 5. The European Union is in the final stages of adopting a legislation that targets the reduction of  $CO_2$  emissions from cars and vans (European Commission, 2019). The need for this legislation derives from the fact that such vehicles are major contributors to air pollution in urban areas.
  - (a) Discuss **TWO** ways how transport-induced air pollution is affecting people in urban areas. (8 marks)
  - (b) Explain, using **THREE** examples, how mobility can become sustainable. In your answer refer to how this issue is being tackled in the Maltese Islands. (17 marks)
- 6. Figure 4 shows the number of international tourist arrivals by world region between 1950 and 2016.

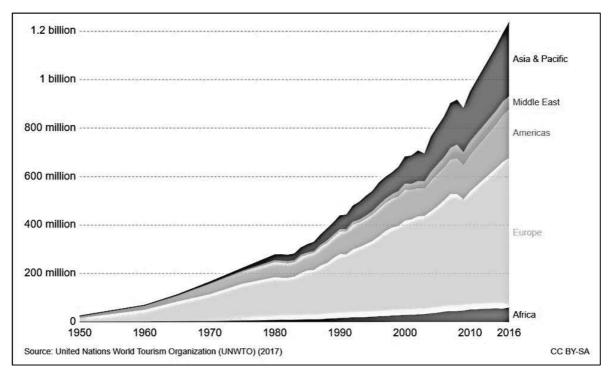


Figure 4: International tourist arrivals by world region (https://ourworldindata.org/tourism)

(a) Outline the key findings of Figure 4.

- (5 marks)
- (b) Discuss **THREE** factors that affected the growth of the global tourism industry in these past 40 years. (6 marks)
- (c) Discuss **TWO** positive and **TWO** negative social impacts resulting from the growth of tourism. (8 marks)
- (d) Discuss **TWO** ways how the European Union (EU) is supporting sustainable tourism. (6 marks)