L-Università ta' Malta

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD

INTERMEDIATE MATRICULATION LEVEL
2019 FIRST SESSION

SUBJECT:	**Geography**
DATE:	20th May 2019
TIME:	9:00 a.m. to 12:05 p.m.

Directions to Candidates

Answer a total of **FOUR** questions: **TWO** questions from **EACH** of the two Sections.
The use of non-programmable calculators is permitted. **ALL** questions carry equal marks.

SECTION A: PHYSICAL GEOGRAPHICAL PROCESSES

1. Figure 1 shows global anthropogenic (i.e. generated by humans) CO_2 emissions produced from the burning of fossil fuels, cement production, and flaring of methane gases at oil and gas drilling sites.

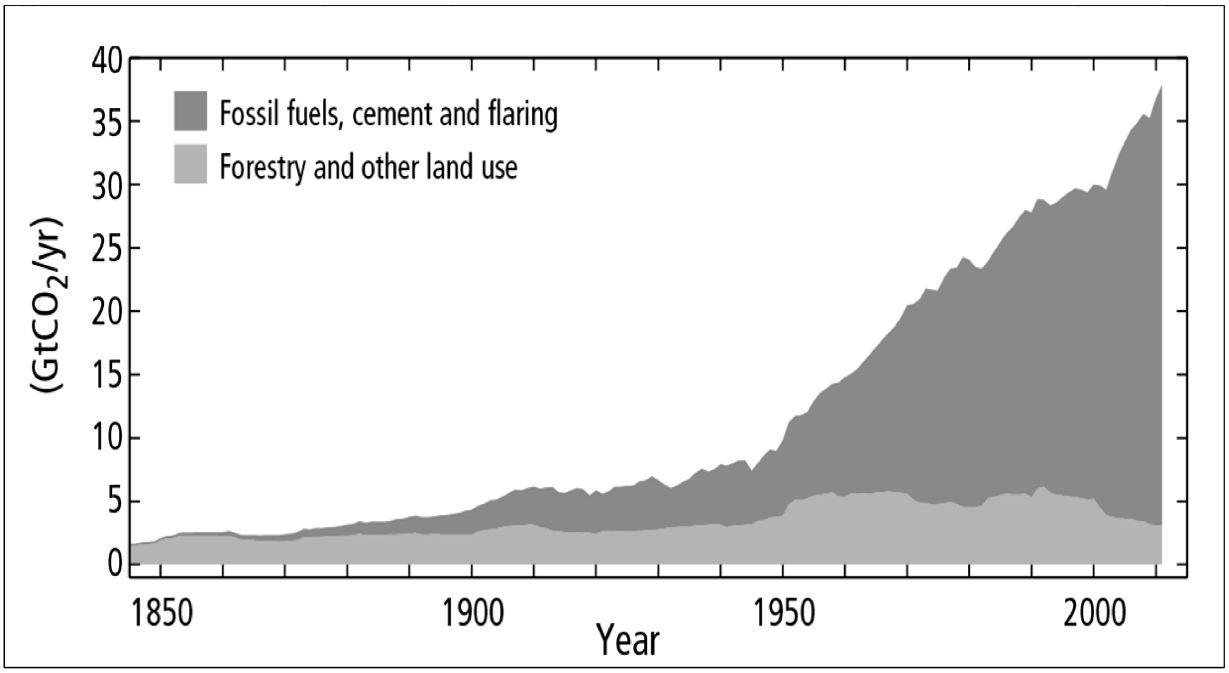

Figure 1 – Global Anthropogenic CO_2 emissions
(Source: IPCC, 2014: Climate Change 2014: Synthesis Report)

(a) Describe the trends shown in figure 1 and discuss why the information it contains should be a source of concern. (10)
(b) Identify the main human activities which burn fossil fuels; therefore producing CO_2 emissions and which countries are contributing most to this CO_2 rise. (5)
(c) Discuss what measures can be taken by countries and individuals to slow down or even reverse this trend. (10)

(Total: 25 marks)

2. Figure 2 is a synoptic chart of the weather conditions over Europe and the north-eastern Atlantic for Saturday 24th February 2019.

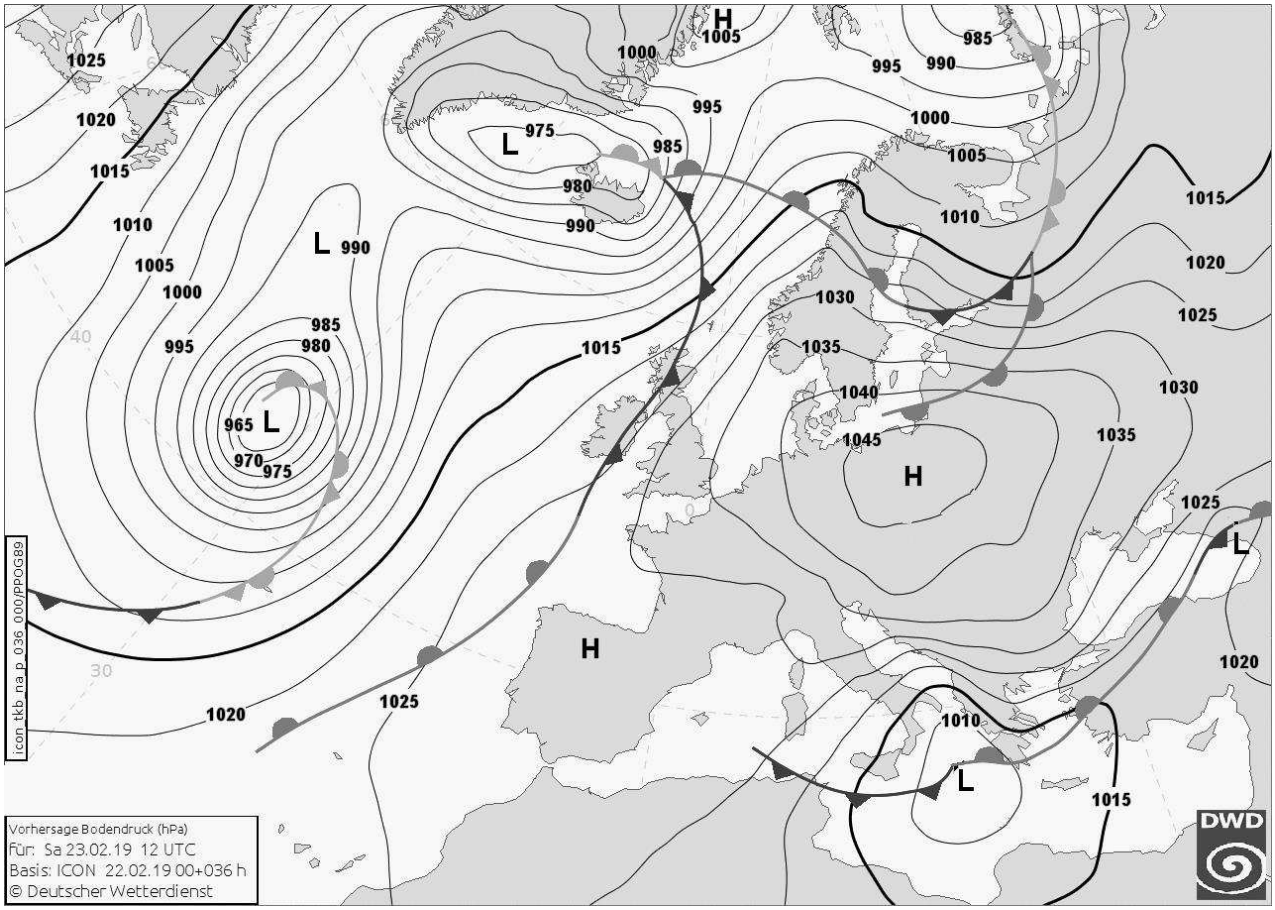

Figure 2 – Synoptic Chart 24-02-2019

(adapted from: www.wetterpate.de)

(a) Refer to Figure 2 and describe the overall meteorological situation over Europe and the north-eastern Atlantic. (6)

(b) What are the present weather conditions over Central Europe and the Iberian Peninsula? (4)

(c) Describe the current weather conditions, and expected changes in the next 24 hours, over Malta and the eastern Mediterranean under the following headings:

(i) temperature changes; (5)

(ii) precipitation and type of cloud cover (if any); (5)

(iii) general estimation of wind speed and direction. (5)

(Total: 25 marks)

3. (a) Explain how each of the following may contribute to soil erosion:

(i) heavy rainfall and surface stormwater runoff; (5)

(ii) deforestation; (5)

(iii) agricultural practices. (5)

(b) Discuss the use of rubble walls in Maltese agriculture as a sustainable practice and the importance of their upkeep. (10)

(Total: 25 marks)

4. Figure 3 shows labelled features typically found in a Maltese karst landscape.

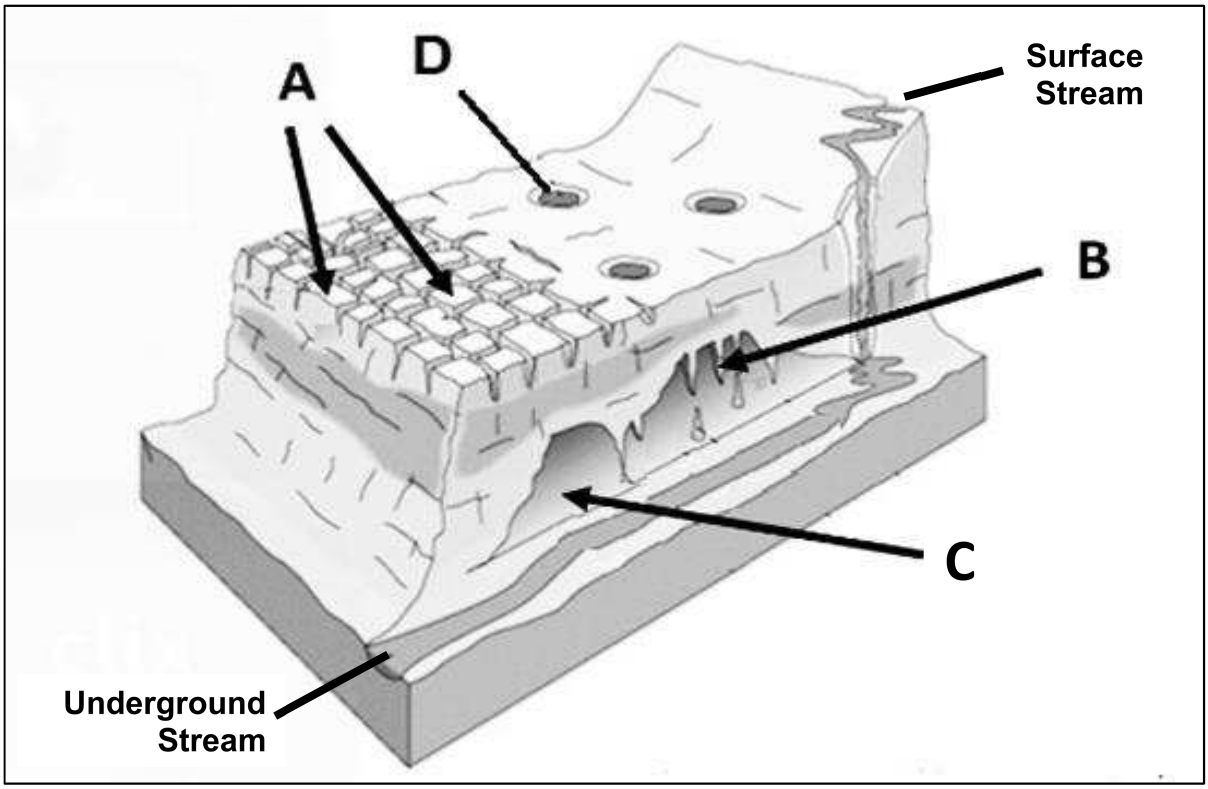

Figure 3 – A karst landscape

(a) Name the **FOUR** labelled features marked A to D in Figure 3. (4)

(b) With reference to the features named in (a), explain the physical processes that lead to their formation. (16)

(c) Explain briefly why karst landscapes, like those in Malta, are characterised by scarce surface water such as rivers and lakes. (5)

(Total: 25 marks)

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SECTION B: HUMAN GEOGRAPHICAL PROCESSES

5. Figure 4 shows the world population pyramid in 1950, 2017 and 2100 as projected by the United Nations – World Population Prospects 2015.

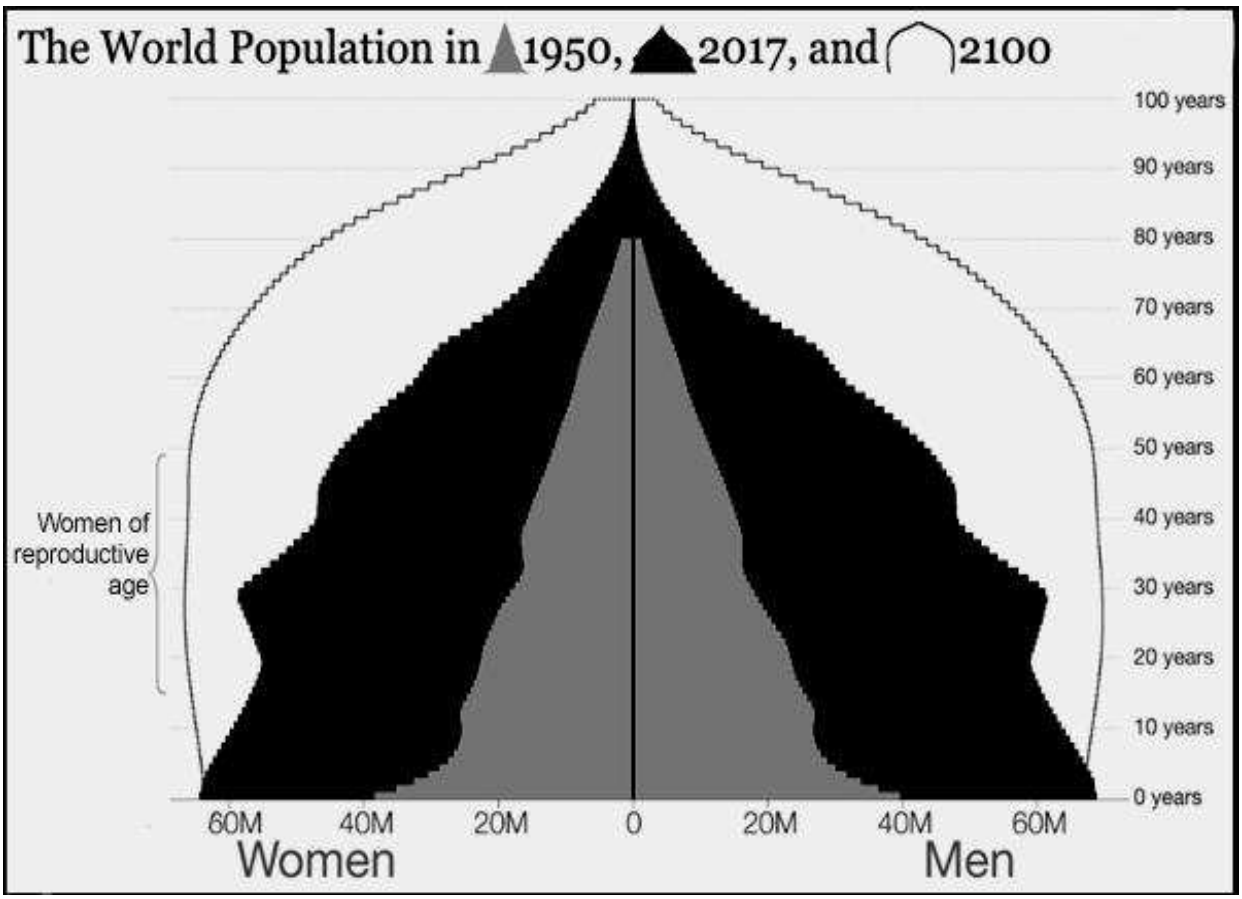

Figure 4 – World population in 1950, 2017 and 2100
(Source: https://ourworldindata.org)

(a) Describe, in detail, each population pyramid in figure 4 by referring to specific age-groups. (9)
(b) Discuss **TWO** main differences between the 1950 pyramid and the projected pyramid for 2100 and provide reasons for such differences. (10)
(c) Discuss **ONE** advantage and **ONE** disadvantage of using population pyramids. (6)
(Total: 25 marks)

6. (a) Define tertiary and quaternary sectors of the economy. (6)
(b) Discuss **THREE** reasons why these industries are on the increase in developed countries. (12)
(c) Describe how these sectors are influencing new employment opportunities in the Maltese Islands. (7)
(Total: 25 marks)

7. (a) What do we mean by a settlement hierarchy? Use a labelled diagram to illustrate your answer. (7)
   (b) Explain how the population size and functions of a settlement vary according to its place within the settlement hierarchy. Illustrate your answer with examples. (6)
   (c) By referring to specific examples, discuss **THREE** problems associated with large cities in:
      (i) developing countries;
      (ii) developed countries. (12)

(Total: 25 marks)

8. Figure 5 shows the main migration routes through the Mediterranean Sea in the last decade.

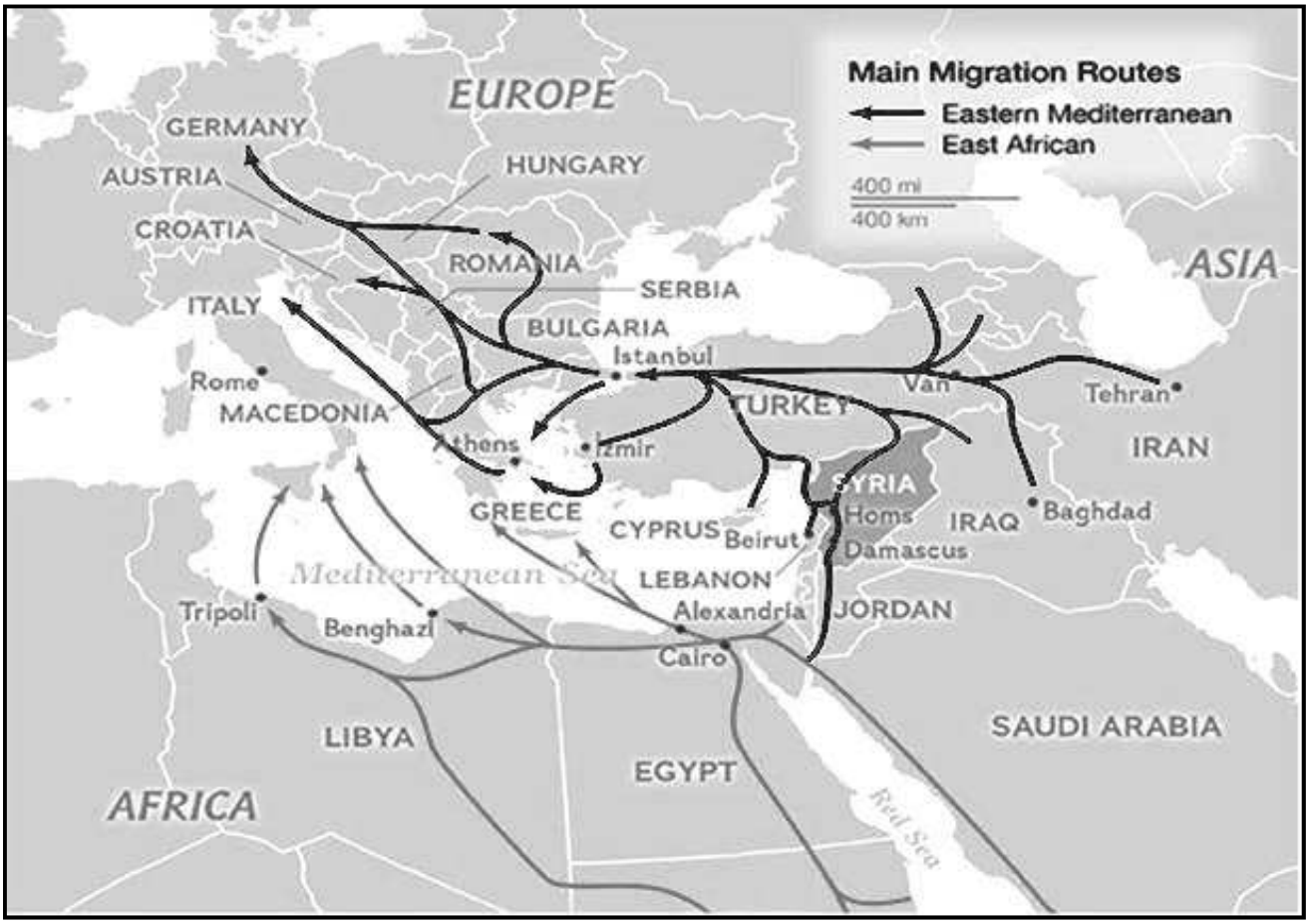

Figure 5 – Main migration routes through the Mediterranean Sea in the last decade.
(Source: https://news.nationalgeographic.com)

   (a) What does the term migration mean? (3)
   (b) Describe the migration routes in the Mediterranean Region as shown in Figure 5. (6)
   (c) Discuss **FOUR** reasons for this mass migration. (12)
   (d) Describe **TWO** problems which migrants face when they arrive at their intended destination. (4)

(Total: 25 marks)