![L-Università ta' Malta]

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD

**ADVANCED MATRICULATION LEVEL
2019 SECOND SESSION**

SUBJECT:	**Geography**
PAPER NUMBER:	I
DATE:	2nd September 2019
TIME:	9:00 a.m. to 12:05 p.m.

Answer **FOUR** questions in total. Questions carry equal marks.

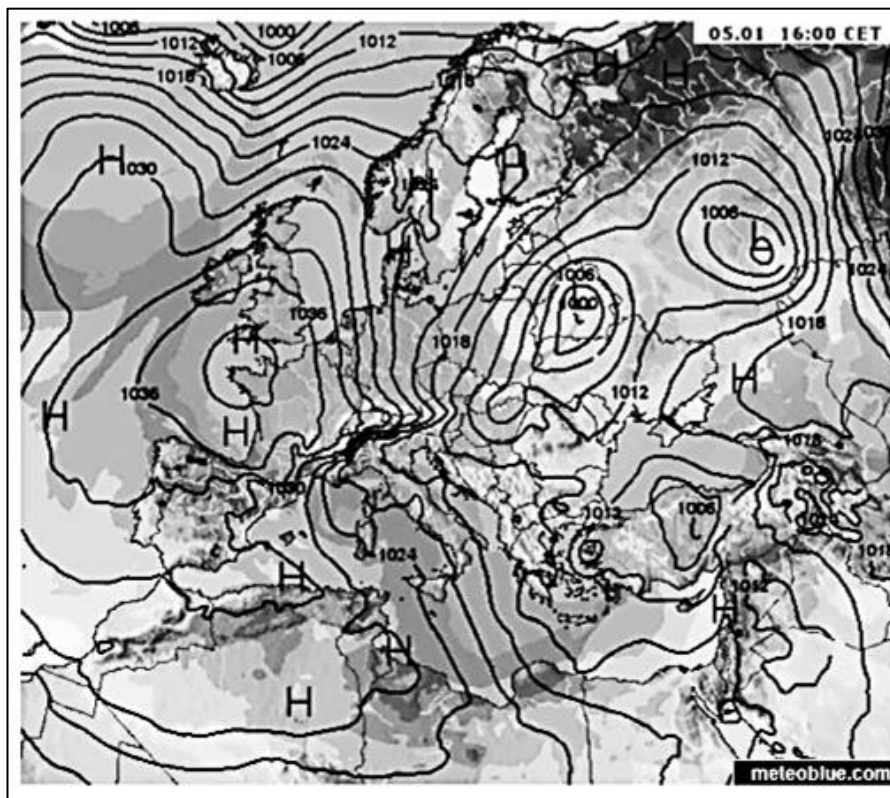1. Figure 1 is a weather map of Europe and the Mediterranean on 5th January 2018 at 16:00 CET.

Figure 1: Weather map on 5th January 2018.
(https://www.meteoblue.com)

(a) Describe the most important meteorological features and generic weather conditions shown by the weather map in Figure 1.   (5 marks)

(b) Describe the key characteristics of the Mediterranean climate.   (8 marks)

(c) Microclimatology refers to the study of climate over a small area. Explain **FOUR** ways how cities in the Mediterranean region differ in their climate when compared to suburban or rural areas.   (8 marks)

(d) Briefly explain how climate change is affecting the Mediterranean climate.   (4 marks)

2. Figure 2 shows a map of the Japanese archipelago which is an example of an island arc.

Figure 2: Map of Japan.
(https://pt.maps-japan.com)

(a) With the help of a detailed labelled diagram, explain the formation of island arcs. Give **ONE** other example of an island arc (apart from Japan). (13 marks)

(b) Describe the types of earthquakes that take place at the site of island arcs and explain why such earthquakes happen in these locations. (6 marks)

(c) Discuss how people adapt to living on island arcs. (6 marks)

3. The Maltese archipelago is eniterely composed of sedimentary rock, which formed over millions of years. Rifting in the vicinity of the Maltese archipelago has given the islands a tilt towards the North-East. The western part of the islands is uplifted forming high cliffs while the eastern coastlines are low-lying (Environment and Resources Authority, 2016)

(a) Briefly explain how the Maltese sedimentary rock was formed. (3 marks)

(b) Faults are a common feature in the Maltese Islands. What are faults? Explain their formation with reference to the **THREE** main types of faults. Include a diagram to illustrate the formation of these different types of faults. (10 marks)

(c) Name and briefly describe the **TWO** main faults in the Maltese Islands. (4 marks)

(d) Two common landforms that characterise the Maltese geological landscape are ridges and valleys. Describe **TWO** main types of valleys in the Maltese Islands and provide an example of each. (8 marks)

4. Figure 3 shows Cala Agulla Beach in Mallorca, Spain.

Figure 3: Cala Agulla Beach, Spain
(https://www.europeanbestdestinations.com/best-beaches-in-europe-2017)

(a) Discuss in detail the **TWO** main variables that affect beach morphology.   (12 marks)

(b) Briefly explain how longshore drift affects the beach profile over time.   (5 marks)

(c) Explain **FOUR** risks that beaches are facing as a result of climate change.   (8 marks)

5. Figure 4 shows a type of landscape found at Majjistral Nature and History Park in Mellieħa.

Figure 4: Majjistral Park, Mellieħa

(a) Identify the type of topography shown in Figure 4 and explain, in detail, how this topography is formed. Give examples of landforms associated with this type of topography in the Maltese Islands.   (13 marks)

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    (b) Discuss **THREE** ways in which the formation of such a topography can be beneficial to humans. Explain with reference to examples from the Maltese Islands.   (12 marks)

6. (a) Explain **THREE** main factors that are required for the formation of soil.   (9 marks)

    (b) Soil is essential for agriculture. Explain, in some detail, **FOUR** physical factors that affect soil fertility.   (8 marks)

    (c) Describe **TWO** soil data collection techniques that are frequently used when conducting a soil survey.   (8 marks)

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**ADVANCED MATRICULATION LEVEL
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SUBJECT:	**Geography**
PAPER NUMBER:	II
DATE:	3rd September 2019
TIME:	9:00 a.m. to 12:05 p.m.

Answer **FOUR** questions in total. Questions carry equal marks.

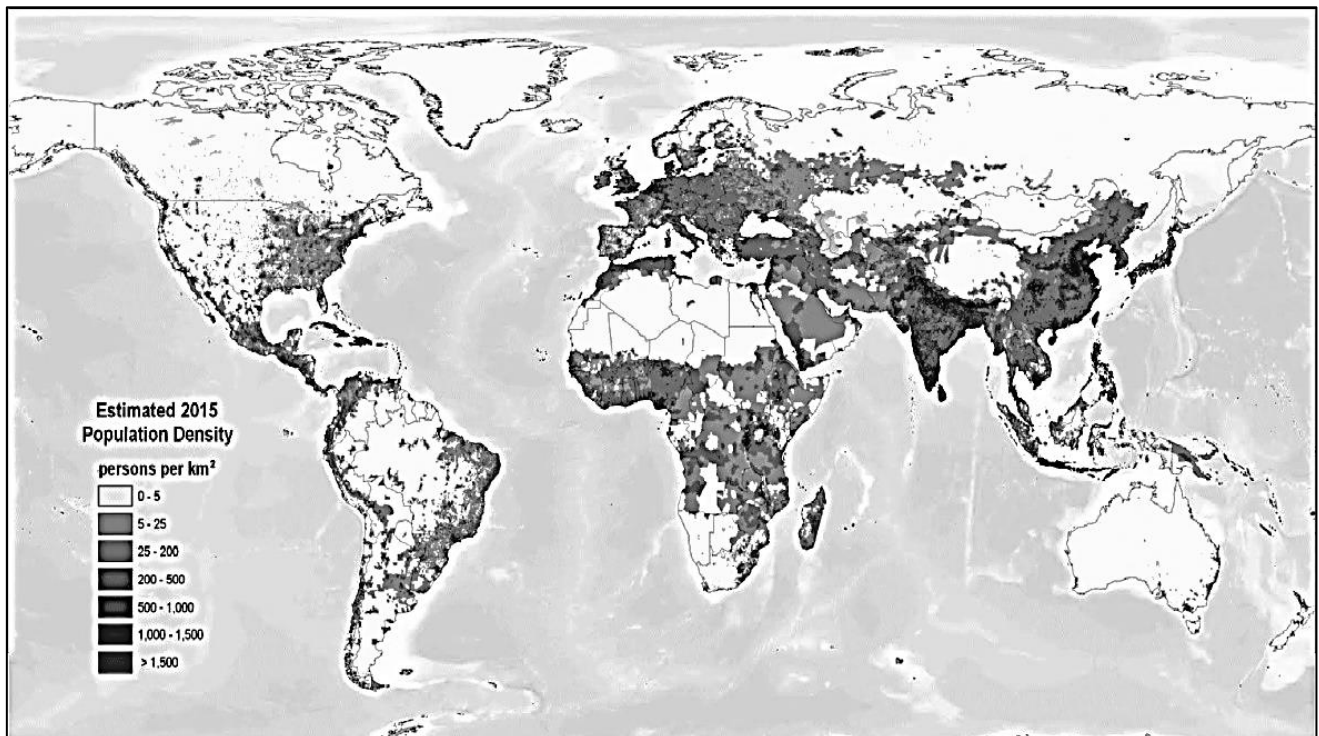1. Figure 1 is a map showing the estimated global population density in 2015.

Figure 1: Global population density in 2015
(https://cdn.freshplaza.com/)

   (a) Briefly explain the distribution of population density shown in Figure 1.   (4 marks)

   (b) Discuss **FOUR** factors that affect the population density of a country.   (8 marks)

   (c) One phenomenon linked to population density is migration. Describe Zelinsky's model of migration and explain how it is related to the distribution of people.   (9 marks)

   (d) Explain **ONE** way how Zelinsky's model of migration is still relevant to the contemporary world and **ONE** way in which it is not.   (4 marks)

2. Figure 2 shows the global land area used for agricultural production, by major crop category measured in hectares from 1961 to 2014.
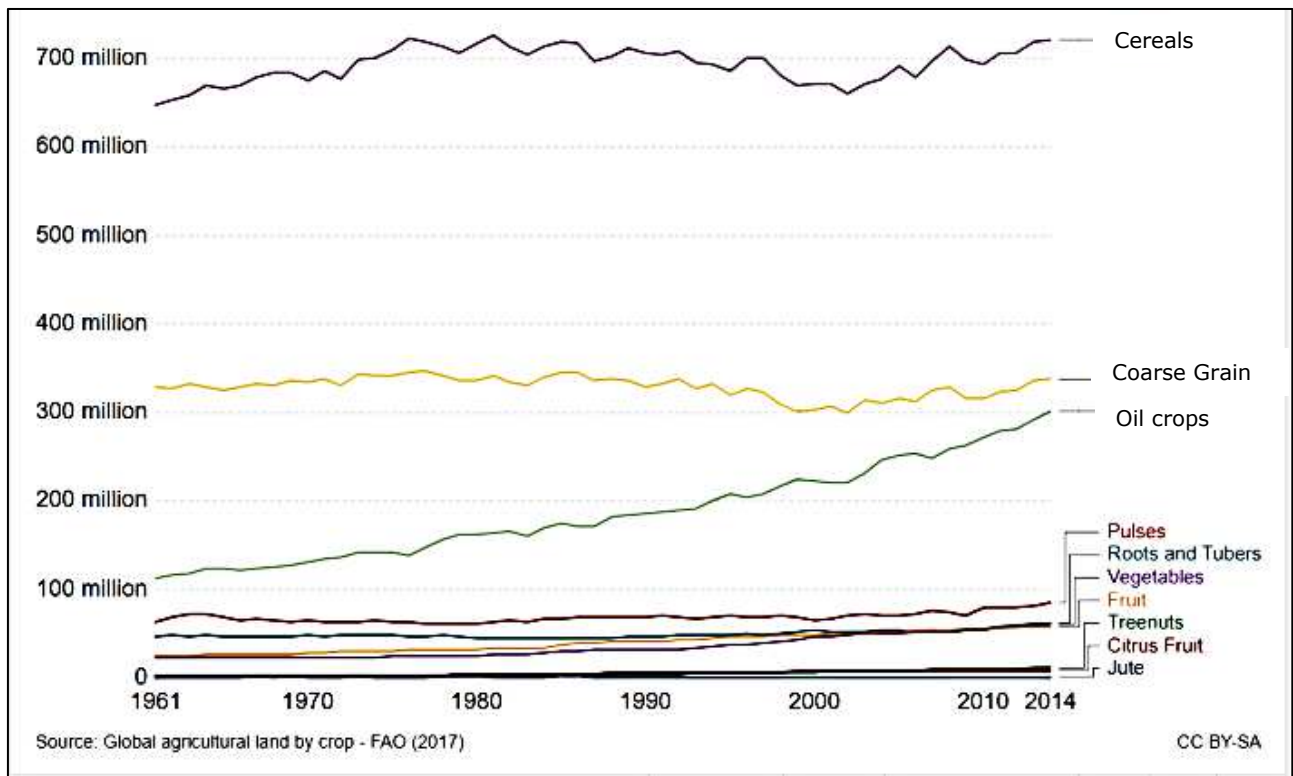

Figure 2: Global land area used for agricultural production, by major crop category (in hectares) from 1961 to 2014 (https://ourworldindata.org/)

   (a) Describe the relationship between agricultural land area and crop category as shown in Figure 2. (4 marks)

   (b) Agricultural activities are affected by physical, human and economic factors. Discuss **THREE** economic factors that affect agricultural activities. (9 marks)

   (c) Discuss **THREE** environmental impacts caused by agricultural activities. (6 marks)

   (d) Discuss **THREE** ways of mitigating the environmental impacts of agriculture. (6 marks)

3. A multinational corporation (MNC) can also be loosely referred to as a transnational corporation (TNC), multinational enterprise (MNE) or a transnational enterprise (TNE).

   (a) What is a multinational corporation? Support your answer with examples. (6 marks)

   (b) Discuss **THREE** advantages and **THREE** disadvantages of MNCs. (12 marks)

   (c) The concept of the new international division of labour (NIDL) is an outcome of globalisation. Explain this statement. (7 marks)

4. 'There is nothing more assured than increasing global oil demand. The world now consumes about 95 million barrels per day of oil, up from 86 million in 2008' (www.forbes.com).

(a) Briefly explain why the global demand for oil is increasing year after year, despite the finite nature of the resource and the environmental concerns surrounding its' use.

(5 marks)

(b) In December 2014, 'OPEC and the oil men' ranked as number three on Lloyd's list of 'the top 100 most influential people in the shipping industry' (https://lloydslist.maritimeintelligence.informa.com). Describe the role of OPEC in the oil industry and explain why it is considered to be so influential on a worldwide scale.

(10 marks)

(c) Figure 3 shows the source of energy resources for electricity generation in 2017. One fourth of all electricity generated in 2017 came from renewable energy sources. Among these sources was hydro power, also referred to as hydroelectric power (HEP). Discuss the most important economic factors favouring its use and outline its main constraints.
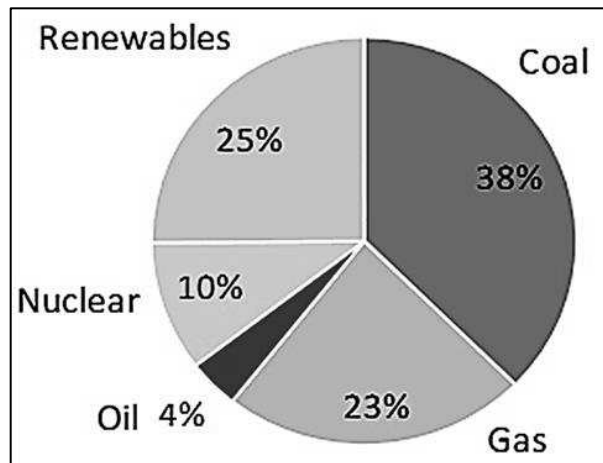
(10 marks)

Figure 3: Electricity generation in 2017
(www.iea.org)

5. Waste disposal is an environmental concern and unless properly managed it has serious negative repercussions (Conserve Energy Future, 2019).

(a) Discuss why waste management is of utmost importance for Malta. (13 marks)

(b) Figure 4 and Figure 5 show the amount of waste (in tonnes) that was recycled in Malta in 2013 and 2017 respectively.

(i) Compare and contrast the recycling figures for Malta in 2013 and 2017. Provide possible reasons for evident changes that can be observed. (6 marks)

(ii) With reference to Figure 4 and Figure 5, suggest ways how the authorities can encourage people to increase their share of recycling and use of recycled materials.
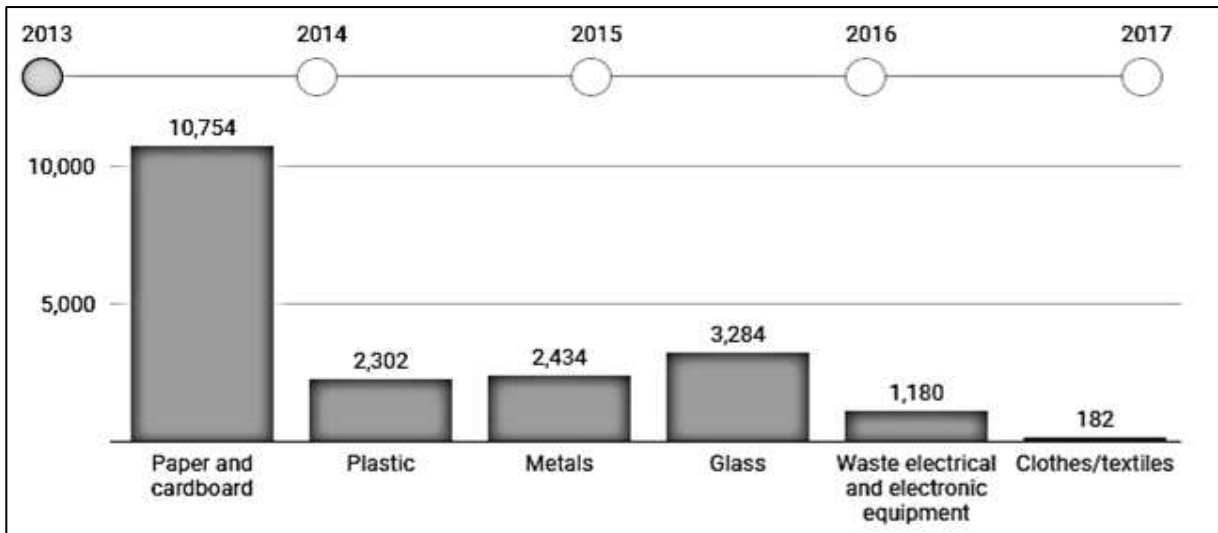
(6 marks)

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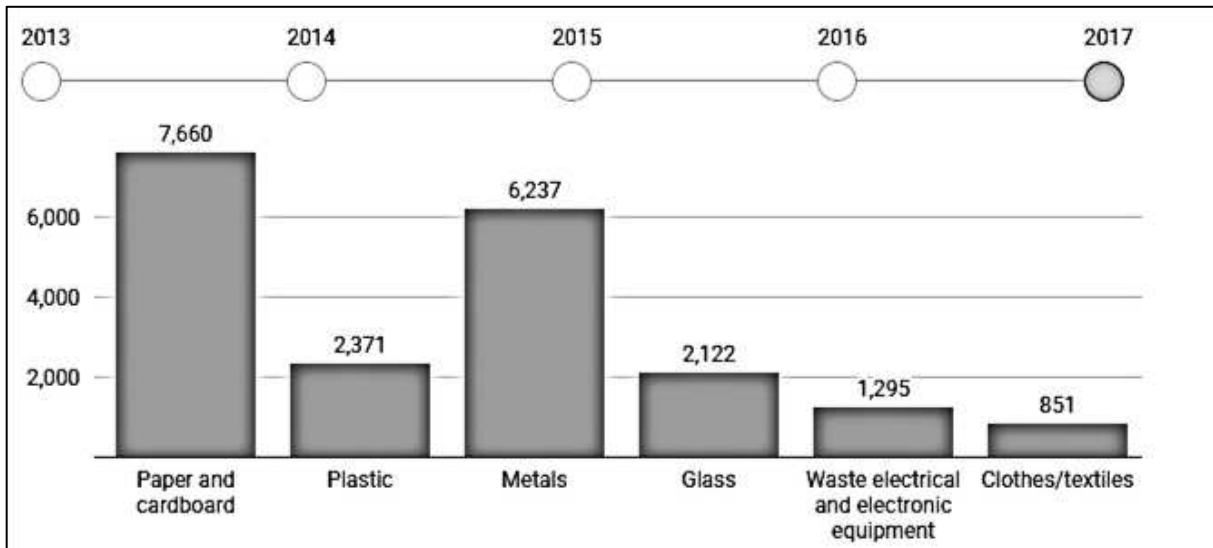
Figure 4: Recycled waste in Malta in 2013
(https://www.timesofmalta.com).

Figure 5: Recycled waste in Malta in 2017
(https://www.timesofmalta.com).

6. Figure 6 shows a luxurious beach resort in Fuerteventura in the Canary Islands.

Figure 6: Beach resort in Fuerteventura in the Canary Islands.
(https://www.touropia.com/spain-beach-resorts/)

(a) Using a diagram to support your answer, describe Butler's tourist resort life-cycle model with reference to local economic development. List **ONE** example where such a model can be applied with respect to the development of a coastal holiday resort. (15 marks)

(b) Cruise tourism and wildlife tourism are two of the fastest growing segments in the tourism industry. With reference to specific examples, outline the main characteristics of both types of tourism and explain the negative impacts associated with them. (10 marks)