

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD
UNIVERSITY OF MALTA, MSIDA

SECONDARY EDUCATION CERTIFICATE LEVEL

MAY 2015 SESSION

SUBJECT:	Geography
PAPER NUMBER:	I
DATE:	20th May 2015
TIME:	9:00 a.m. to 11:00 a.m.

Answer ALL questions

1. Examine Figure 1, the map extract for northwest Malta (scale 1:25,000) and answer the following questions:

(a) Give the six-figure grid reference for the following:

- i. The pumping station marked B (1 mark) _____
- ii. Zammitello Palace marked C (1 mark) _____

(b) From the main trigonometric station labelled A give the compass direction of:

- i. The pumping station labelled B (1 mark) _____
- ii. Zammitello Palace labelled C (1 mark) _____
- iii. The Trigonometrical station at Pellegrin marked D (1 mark) _____

(c) What is the difference between the type of trigonometrical stations identified at A and D? (2 marks)

(d) Estimate the length of road in metres from Mellieħa to Manikata between E and F. A start and end point has been marked on the map. (3 marks)

(e) Manikata is still considered to be a hamlet. Using the topographic information shown by the contours on the map describe the landscape and the advantages of living there. (6 marks)

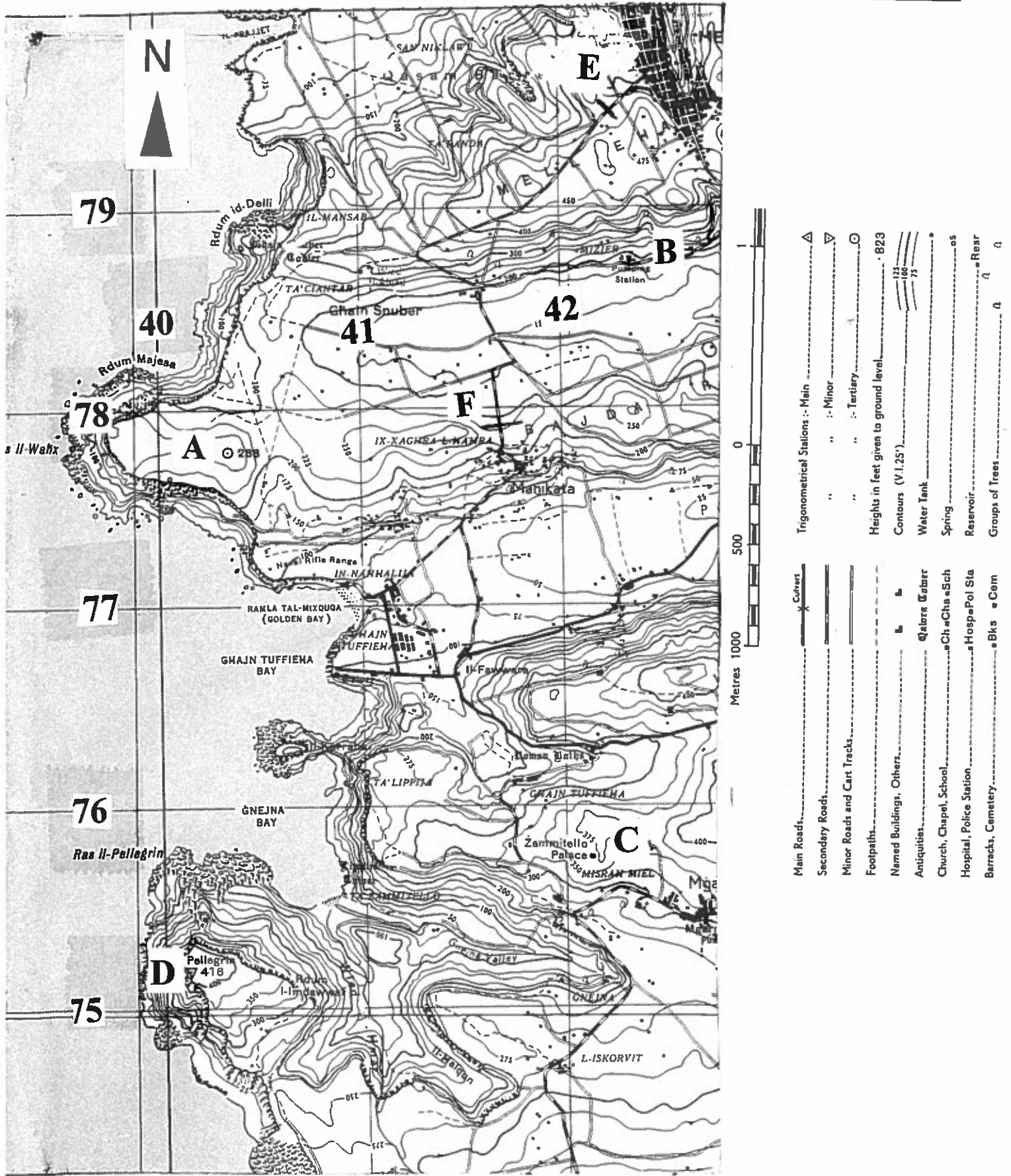


Figure 1

2. Study the world map (Figure 2) and then answer the following questions.

(a) Match the following with locations marked on the map and numbered 1 to 5. (5 marks)

Description	Name of Location
Major tsunami in 2004	
Desertification processes	
Hydro Electric Power Station	
A Primate City	
A Major Volcano	

(b) Name the major ocean currents marked A to D. (2 marks)

A _____ B _____

C _____ D _____

(c) Name the countries numbered 6 to 9. (2 marks)

6 _____ 7 _____

8 _____ 9 _____

(d) Name the mountain systems numbered 10 to 13. (4 marks)

10 _____

11 _____

12 _____

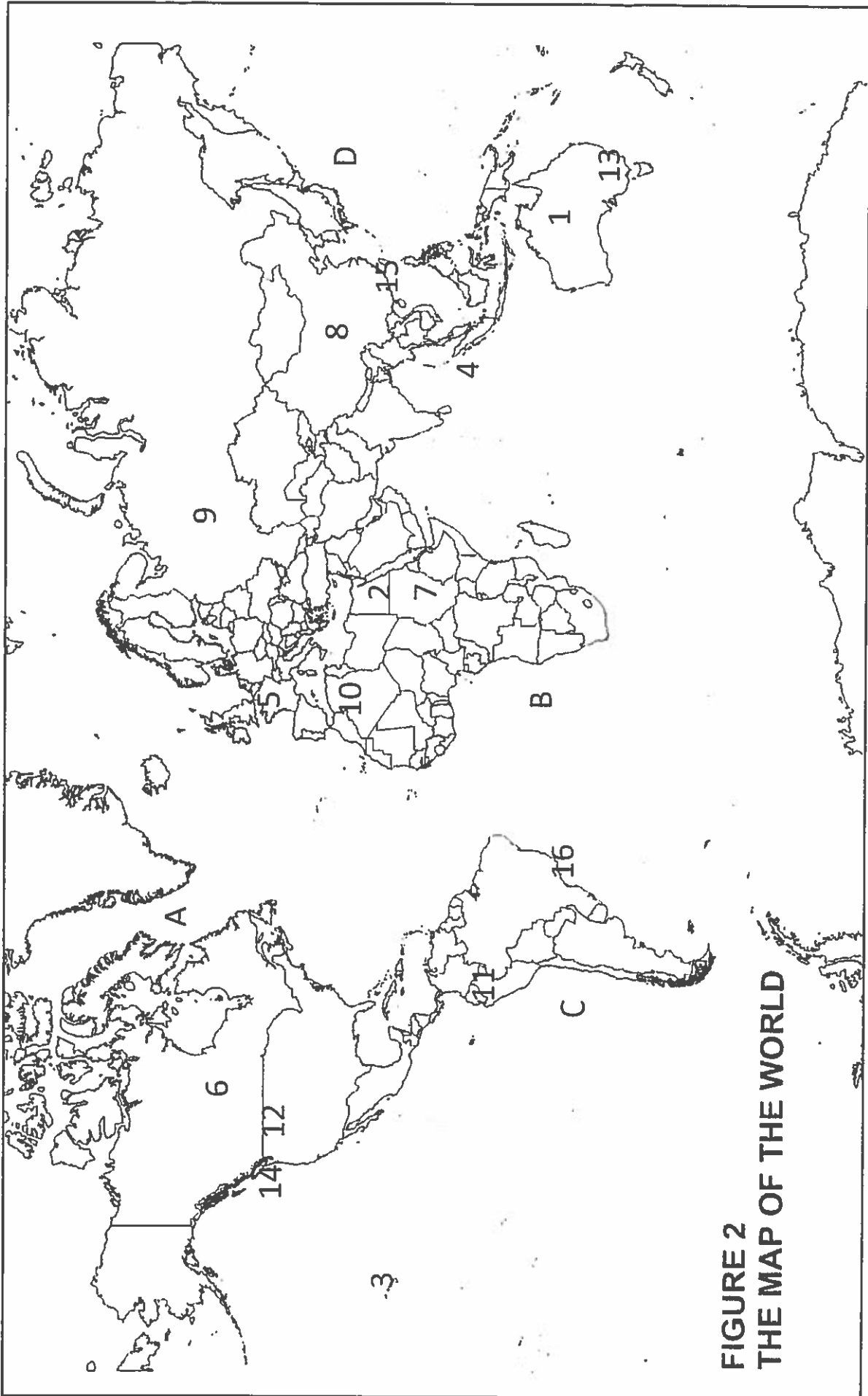
13 _____

(e) Name the major ports numbered 14 to 16. (3 marks)

14 _____

15 _____

16 _____



**FIGURE 2
THE MAP OF THE WORLD**

3. Study the two maps in Figure 3:

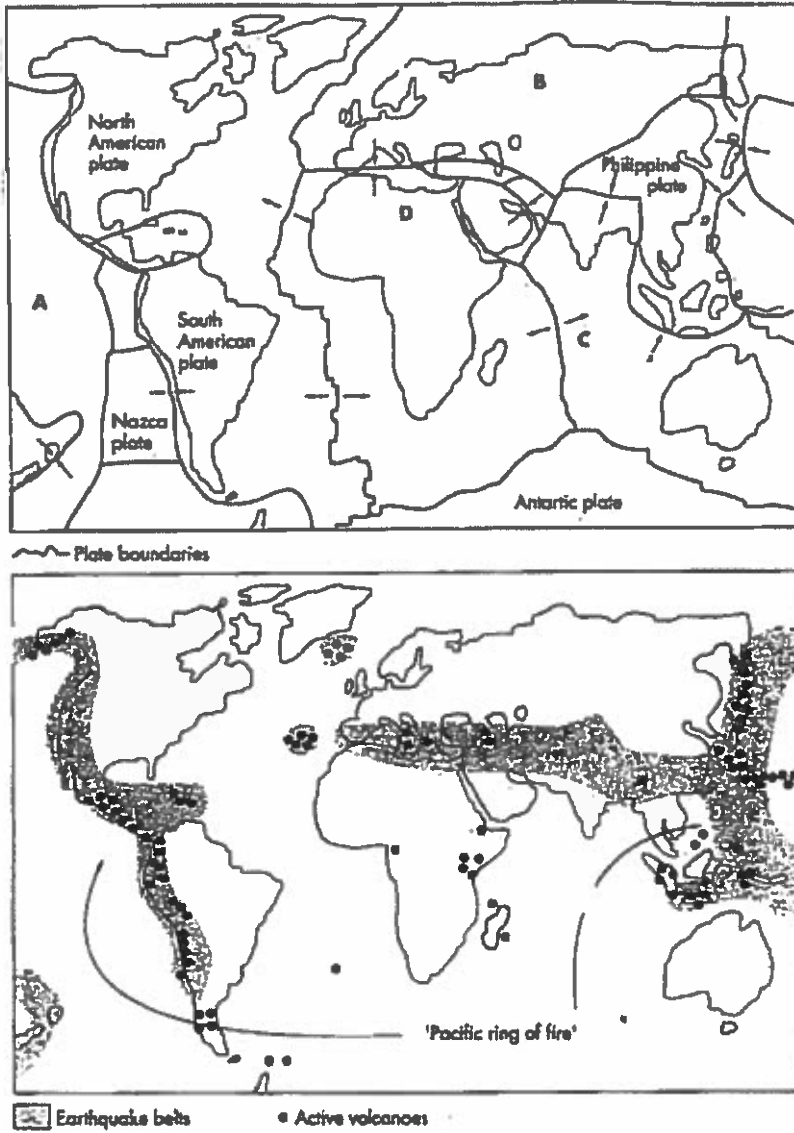


Figure 3: Location of plate boundaries and related features.

(a) Explain the terms 'tectonic plates' and 'plate margins'. (6 marks)

(b) Name the plates labelled A, B, C and D. (4 marks)

A	
B	
C	
D	

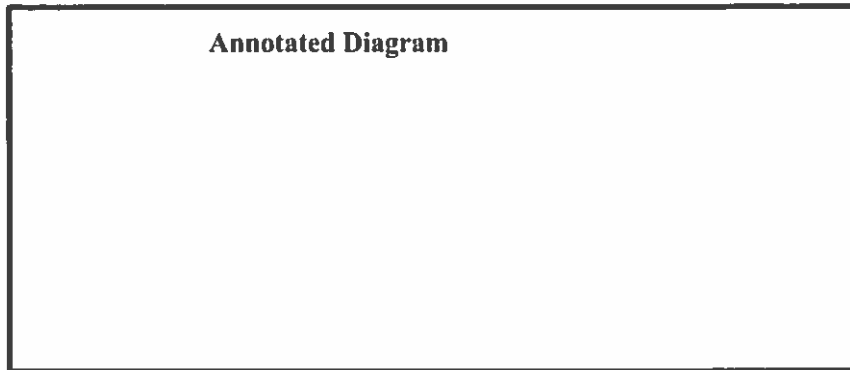
4. Figure 4 (below) shows wave cut platforms backed by cliffs at Selmun Bay.



Figure 4: Wave cut platforms at Selmun Bay.

(a) Briefly explain the term 'wave-cut platform'. (2 marks)

-
- (b) With the help of an annotated diagram, explain how wave erosion contributes to the creation of such coastal landforms. (5 marks)



5. The paragraph below is an explanation of what happens in a desert. Fill in the blanks with the words provided in the box below. (3 marks)

surface, pedestalrock, saltation, wind, sandblast, barchan

The _____ is an important agent of erosion. In deserts it can literally _____ the landscape. Most erosion takes place near the _____ because the wind cannot lift sand particles very high off the ground. This means they often bounce along the surface by a process known as _____. Wind action armed with sand can result in unusual rock formation. For example, harder or more resistant rocks may form _____. Crescent shaped sand dunes, known as _____ also form in the desert.

6.

(a) At one time most Mediterranean hillsides were extensively wooded. These forests have however diminished due to destruction from natural fires or have been cut down for human needs. Name and briefly describe the characteristics of the **two** major types of scrub that have resulted from this. (4 marks)

(b) The vegetation in the Mediterranean has adapted to the long summer droughts. Briefly explain **two** different ways trees and plants have adapted to the Mediterranean environment. (2 marks)

7. Look at the figures below and briefly describe how the shape of the settlement is classified. (6 marks)

(a)



(b)



(c)



8. Sao Paolo is located in Brazil's south east coast and is the largest city in terms of population.

(a) List **two** reasons for Sao Paolo's rapid population growth. (2 marks)

i. _____

ii. _____

(b) List **two** pull factors attracting people to cities and urban areas and **two** push factors encouraging people to leave the rural areas. (4 marks)

Pull i. _____

Pull ii. _____

Push i. _____

Push ii. _____

9. Uneven development in the world has produced a North/South Divide.

(a) Explain the term North/South Divide. (3 marks)

(b) Using the map in Figure 5 draw the line that separates this "North" from this "South". (1 mark)



10.

(a) What is acid rain? (2 marks)

(b) Briefly explain the effects of acid rain on the natural environment. (4 marks)

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SECONDARY EDUCATION CERTIFICATE LEVEL

MAY 2015 SESSION

SUBJECT:	Geography
PAPER NUMBER:	IIA
DATE:	22 nd May 2015
TIME:	9:00 a.m. to 11:00 a.m.

Answer any two (2) Questions from Section A and any other two (2) questions from Section B.

ANSWER FOUR QUESTIONS IN TOTAL

Answers are to be written on the booklet provided.

Each question carries a total of 25 marks. Marks allocated to parts of questions are indicated.

Good use of language and orderly presentation are important. Credit will be given for relevant illustrations.

The use of non-programmable calculators and geometric instruments is permitted.

SECTION A: Answer two (2) questions from this Section.

1. Figure 1 shows a typical soil profile model.

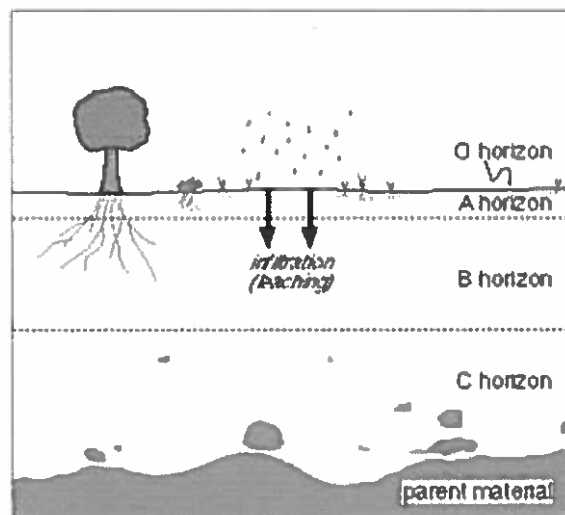


Figure 1: A typical soil profile model.

- (a) Explain the following terms:
- Soil horizon (3 marks)
 - Parent material. (3 marks)
- (b) Distinguish between the **four** soil horizons displayed in the model. (10 marks)
- (c) How does each of the following affect the formation of soil?
- Parent rock (3 marks)
 - Climate (3 marks)
 - Flora and fauna. (3 marks)

2.

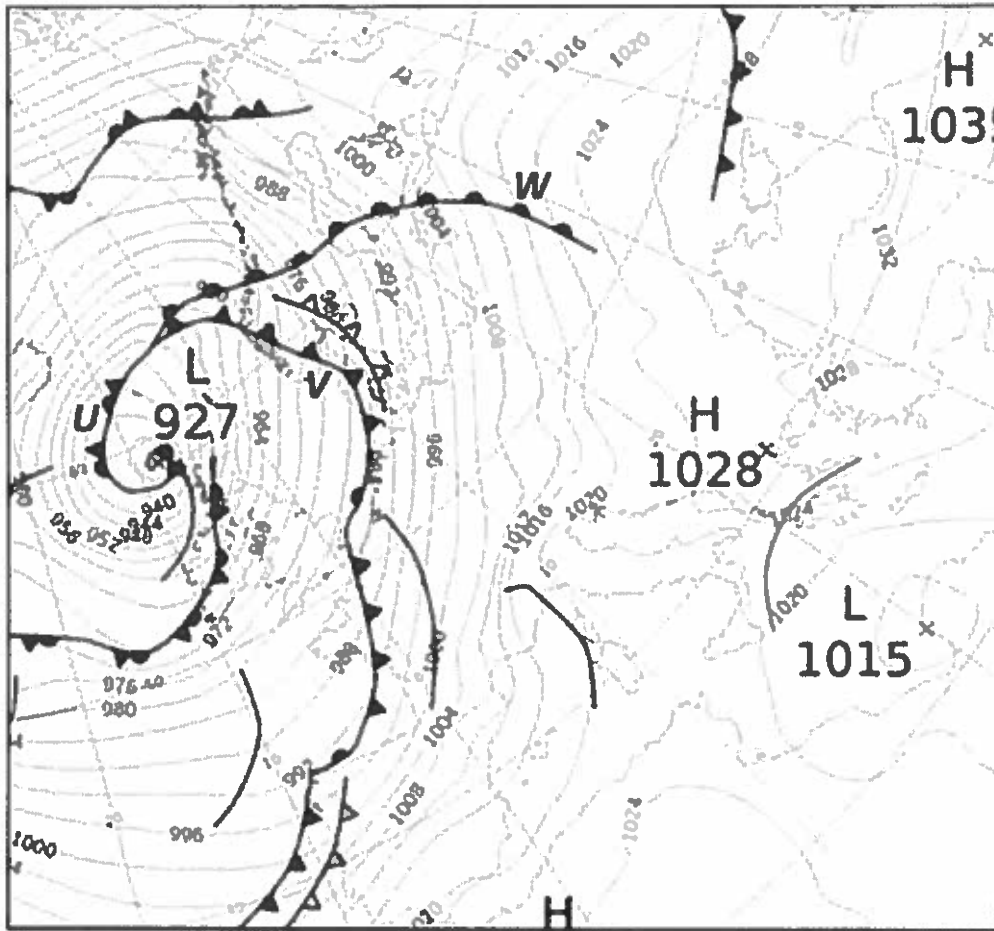
- (a) Why do earthquakes occur? (6 marks)
- (b) Give the meaning of (i) focus, (ii) epicentre, (iii) seismic wave. (6 marks)
- (c) A major earthquake occurred in Japan at Kobe in 1995.
 - i. Explain why Japan is prone to many earthquakes? (4 marks)
 - ii. What were the effects of this earthquake on the areas around it? (4 marks)
 - iii. What did the authorities do to counter the problems generated by the earthquake? (5 marks)

3.

- (a) Mountain faces and slopes crumble due to freeze-thaw weathering (frost shattering). With the help of annotated diagrams explain the process of freeze-thaw weathering. (4 marks)
- (b) As ice moves, it erodes the landscape. Name **two** processes and explain how this happens. (4 marks)
- (c) Glaciated highlands, apart from being nearly always scenically attractive, have certain advantages which encourage human activity. With reference to glaciated areas list and explain **three** features attracting human activities in these areas. (9 marks)
- (d) In glaciated highlands there is the danger that development for economic reasons may spoil the natural beauty of these areas. Referring to **two** of the human activities explained in (c), discuss the problems and conflicts these activities create in the area. (8 marks)

4. Refer to the synoptic weather chart shown in Figure 2 and answer the questions below.

Figure 2: Weather map of Northern Europe and the Mediterranean on the 24th December 2013



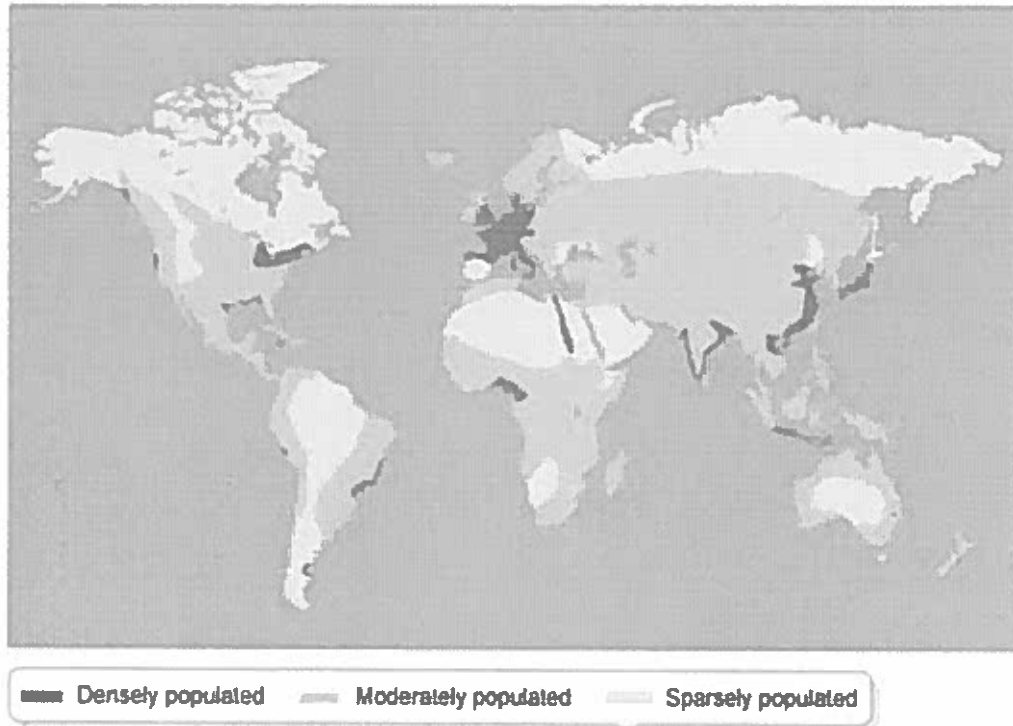
www.metoffice.gov.uk

- (a) What type of pressure system is on:
 - i. the central part of the Mediterranean between Sicily and Libya? (1 mark)
 - ii. Northern Europe? (1 mark)
- (b) Compare and contrast the weather conditions in the central Mediterranean area and Northern Europe. (12 marks)
- (c) Referring to the map, name the fronts labelled U, V and W. (3 marks)
- (d) With the use of a detailed diagram, draw and explain the passage of fronts V and W shown on the map. (8 marks)

SECTION B: Answer two (2) questions from this Section.

5. The way in which people are spread across a given area is known as population distribution. Figure 3 shows the distribution of population across the world.

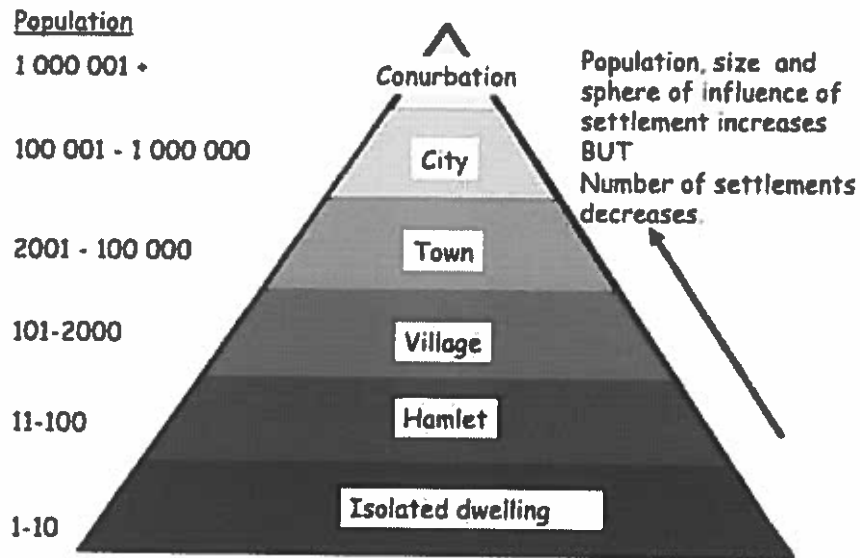
Figure 3: Distribution of Population in the World. Source GCSE Bitesize (2014).



- (a) Describe the distribution as shown in Figure 3. What is most evident? (5 marks)
- (b) List and describe **two** factors that attract settlement. Give examples from around the world. (10 marks)
- (c) List and describe **two** factors that discourage settlement. Give examples from different parts of the world. (10 marks)

6. Settlements are classified in a hierarchy which groups them according to their size and shape. Examine Figure 4 and answer the following questions.

Figure 4: Pyramid showing the relationship between population and services.



- (a) Explain Figure 4 and give examples from around the world for five of the types of settlement in the hierarchy. (15 marks)
- (b) Explain the meaning of the term Primate City. Give two examples of Primate Cities in Europe. (10 marks)

7. Tourism is a very important part of the Maltese economy with 1.5 million tourists visiting throughout the year in 2013. Examine Table 1, which shows a number of important indicators, and answer the following questions.
- (a) What are the effects of tourism on Malta's natural environment given that the local population is 421,000? (10 marks)
- (b) Using the data provided in Table 1 identify the "shoulder months" and describe their performance when compared to the other months. (5 marks)
- (c) What can be done to obtain a more even monthly distribution of incoming tourists? (10 marks)

Table 1: Monthly breakdown of Malta's main inbound Tourism indicators

Month	Number of Inbound Tourists	Number of Guestnights	Average length of stay in days
January	64,887	517,103	8.0
February	61,442	478,149	7.8
March	89,286	687,578	7.7
April	133,173	878,959	6.6
May	155,366	1,119,468	7.2
June	162,879	1,246,270	7.7
July	181,899	1,750,052	9.6
August	218,271	2,157,339	9.9
September	176,370	1,457,733	8.3
October	173,306	1,278,778	7.4
November	99,928	751,284	7.5
December	65,345	567,553	8.7
Total	1,582,153	12,890,268	8.1

Source: National Statistics Office (2014)

- 8.
- (a) Explain the difference between renewable and non-renewable energy resources giving three examples of each. (10 marks)
- (b) In Egypt the Aswan High Dam was built mainly to increase the area of cultivated land and, at the same time, produce electricity. Discuss the benefits and problems of this project. (15 marks)

SECONDARY EDUCATION CERTIFICATE LEVEL

MAY 2015 SESSION

SUBJECT:	Geography
PAPER NUMBER:	IIB
DATE:	22nd May 2015
TIME:	9:00 a.m. to 11:00 a.m.

Answer any two (2) Questions from Section A and any other two (2) questions from Section B.

ANSWER FOUR QUESTIONS IN ALL

Answers are to be written on the booklet provided.

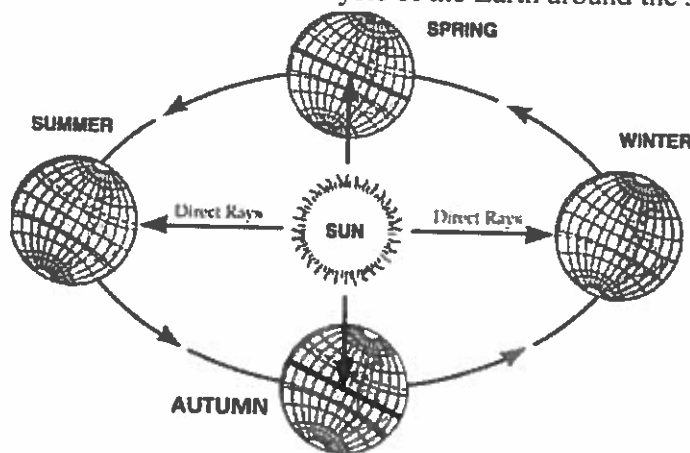
Each question carries a total of 25 marks. Marks allocated to parts of questions are indicated.

Good use of language and orderly presentation are important. Credit will be given for relevant illustrations.

The use of non-programmable calculators and geometric instruments is permitted.

SECTION A: Answer TWO (2) questions from this Section.

1. Figure 1 shows the rotation and revolution cycle of the Earth around the sun.



- (a) Define the following terms:
- Rotation of the Earth. (5 marks)
 - Revolution of the Earth. (5 marks)
- (b) With reference to Figure 1, answer the following questions:
- What causes the changes in seasons? (5 marks)
 - Why is winter cold and summer hot? (5 marks)
 - In the Northern hemisphere, why do we get longer days in summer and longer nights in winter? (5 marks)

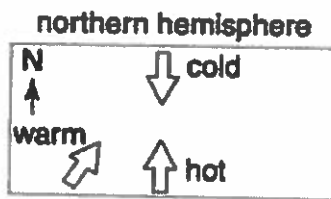
2.

(a) Define the following terms:

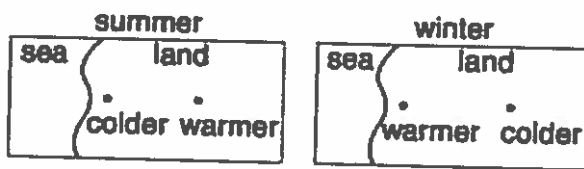
- (d) Latitude;
- (e) Prevailing wind;
- (f) Ocean currents;
- (g) Distance from the sea;
- (h) Relief. (15 marks)

(b) Match the terms listed in (a) with the diagrams below numbered i to v, based on the factors which affect the temperature experienced in any given place. (10 marks)

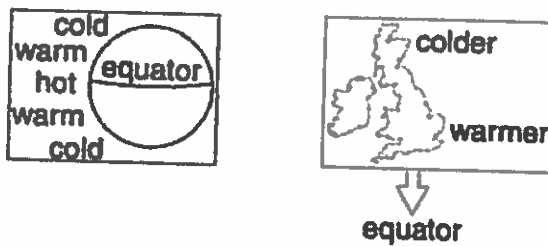
i.



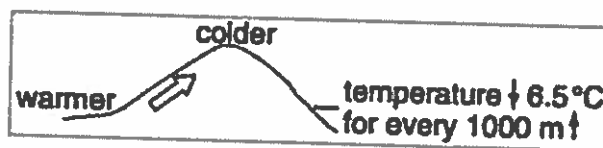
ii.



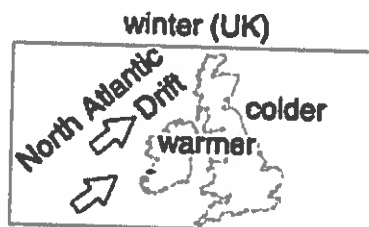
iii.



iv.



v.



3.

- (a) In the Amazon forest the weather conditions of one day are very much like those of another. A typical day is shown hereunder. Copy the table below and fill it in with the appropriate phrases provided below in order to explain the daily weather conditions. (7 marks)

Time	Weather condition in the Amazon
06.00	
08.00	
12.00	
13.00	
15.00	
17.00	
18.00	

i.
Temperature reaches 33°

ii.
Clouds have grown into black towering cumulonimbus, torrential rain accompanied by thunder.

iii.
Temperature is as high as 25°

iv.
Sunrise and mist starts to evaporate.

v.
High temperature causes air to rise in convection currents.

vi.
Sunset, warm nights.

vii.
Storm ceases, the air is calm.

- (b) The Amazon rainforest in Brazil has one third of the world's trees. However, these are being reduced at a rapid rate. Discuss the causes of deforestation in the Amazon forest. (8 marks)
- (c) Explain the negative effects of these forest clearances on the earth's environment. (10 marks)

4.

- (a) With the help of an annotated diagram describe the origin and properties of the five rock layers of the Maltese Islands. (15 marks)
- (b) Figure 2 shows a typical scene in a Maltese quarry. Name the layer of rock being extracted from this quarry. Discuss **two** environmental problems caused by this industry. (10 marks)



Figure 2: Maltese quarry

SECTION B: Answer TWO (2) questions from this Section.

5.

- (a) Explain the difference between “emigration” and “immigration”. (4 marks)
- (b) List and describe the **four** reasons why people migrate. (12 marks)

Figure 3: Migration Patterns in the Mediterranean Sea.



- (c) Figure 3 shows today’s migratory patterns in the Mediterranean. Describe these patterns and give examples to illustrate your answer. (9 marks)
6. In Less Economically Developed Countries (LEDCs) the problems of rapid urbanization and population growth are visible in the settlement development but also in the population structure.
- (a) Using examples of cities from South America, list **five** problems that cities face when there is rapid population growth. (10 marks)
 - (b) Describe **two** efforts implemented in shanty towns in South American cities to improve the built environment and quality of life. (15 marks)

7.

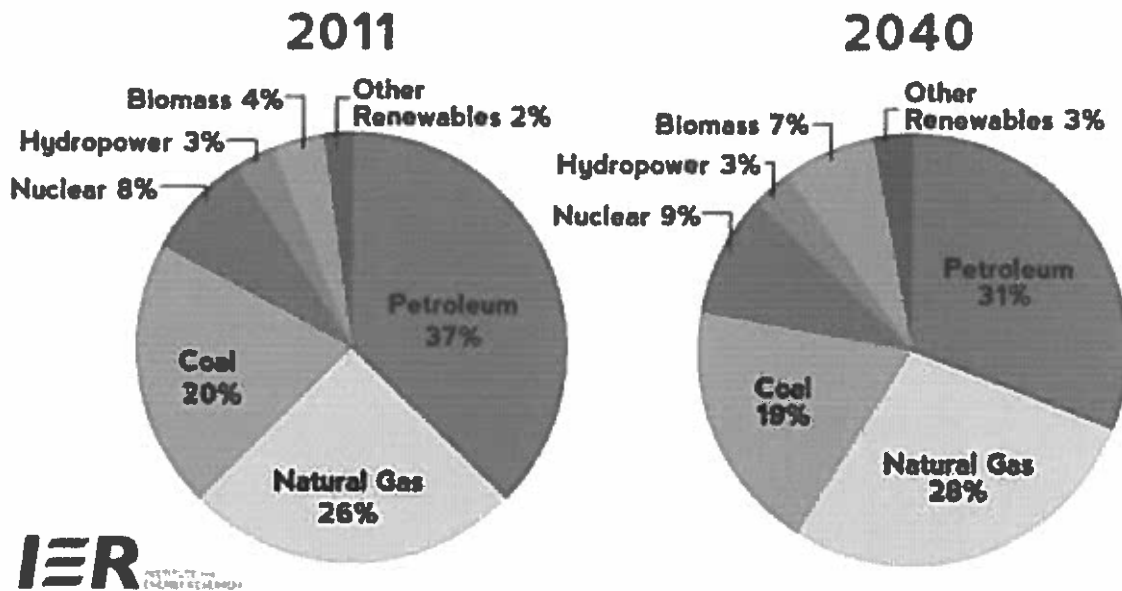
(a) The Maltese Islands have many hotels and guesthouses that are used by the 1.5 million tourists that visit annually. Describe briefly the advantages and disadvantages of **two** places in Malta and/or Gozo that have a high density of hotels/guesthouses. (13 marks)

(b) Explain why Comino is also popular with tourists. (12 marks)

8. With the growth of the world’s population the demand for energy will be increasing substantially. Figure 4 provides information on the different types of energy used now and as projected for the future.

(a) From Figure 4 list (i) the renewable, and (ii) the non-renewable types of energy shown. (7 marks)

Figure 4: Types of energy demands in 2011 and as projected for 2040



(b) Give **three** reasons for the percentage increase in biomass fuel. (9 marks)

(c) Describe the benefits of decreasing the use of petroleum. (9 marks)