All answers should be written on a separate paper provided, except for question 10a.

Section A
Answer all questions from this section (from 1 to 9). Answers should be brief and to the point.

1. a. Explain what is meant by the term ‘weather’. 
   b. Figure 1 shows Mt Kilimanjaro. Explain why snow lies all year round on Mt Kilimanjaro, even though this is located close to the Equator.

2. In Figure 2 you can see the towns of Wroclaw (Poland) and Calais (France). Both towns are 51°N of the Equator.
Table A shows the temperature in degrees Celsius (°C) of the two towns.

<table>
<thead>
<tr>
<th>Month</th>
<th>Wroclaw</th>
<th>Calais</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>-3</td>
<td>6</td>
</tr>
<tr>
<td>February</td>
<td>-1</td>
<td>6</td>
</tr>
<tr>
<td>March</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>April</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>May</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>June</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>July</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>August</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>September</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>October</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>November</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>December</td>
<td>0</td>
<td>7</td>
</tr>
</tbody>
</table>

Table A: Temperatures (°C) for Wroclaw and Calais

a. Why is Wroclaw warmer in summer than Calais? (2)
b. Why is Wroclaw colder in winter than Calais? (2)

3. Briefly explain **four** ways by which the natural vegetation of the tropical rainforest has adapted to the equatorial climate. (4)

4. Describe **two** main characteristics of the hot desert type of climate. (4)

5. The natural vegetation of the Mediterranean is **woodland** and **scrub**. What do the words **woodland** and **scrub** mean? (4)

6. Give reasons to explain why:
   a. Mediterranean plants have small, thin, waxy leaves;
   b. Many Mediterranean plants have long roots;
   c. Some Mediterranean plants have bulbs;
   d. Mediterranean plants grow mainly in winter. (4)

7. **Soil erosion** is a problem that affects many places in the world. It is a natural process but it is also affected by the way people use the land. **Overgrazing**, **deforestation** and unsuitable farming methods like **up and down ploughing** all help to speed up the rate of soil erosion. Explain the meaning of the terms written in bold. (4)

8. To answer this question, choose from: **carbon dioxide**, **nitrous oxide**, **methane**.

   Name the greenhouse gas emitted from:
   a. the burning of fossil fuels in power stations;
   b. landfill sites;
   c. the burning of forests;
   d. road vehicles. (4)
9. Study carefully the map of Europe shown below in Figure 3.

a. Name the countries numbered 1, 2, 3, 4, 5 and 6 on the map. (6)

b. Name two countries in the European Union with coastlines on the Mediterranean Sea. (2)

Figure 3: Map of Europe

Section B

Answer any three questions from questions 10 to 13 in this section. Answers should be detailed. Each question carries 20 marks.

10. Study Table B which shows carbon dioxide levels between the years 1750 and 2050. Then answer the questions that follow the table.

<table>
<thead>
<tr>
<th>Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1750</td>
<td>100</td>
</tr>
<tr>
<td>1800</td>
<td>102</td>
</tr>
<tr>
<td>1850</td>
<td>104</td>
</tr>
<tr>
<td>1900</td>
<td>108</td>
</tr>
<tr>
<td>1950</td>
<td>112</td>
</tr>
<tr>
<td>2000</td>
<td>120</td>
</tr>
<tr>
<td>2050</td>
<td>160 *</td>
</tr>
</tbody>
</table>

Table B: Carbon dioxide levels
* projection
a. Using the data provided in Table B, draw a line graph on Figure 4 to show the levels of carbon dioxide in the atmosphere. (7)

b. Describe what the graph shows. (2)

c. Does your graph suggest that global warming is happening? (2)

d. Give two reasons for the increase of CO₂ in the atmosphere. (2)

e. Explain how the burning of fossil fuels may cause global warming. (4)

f. List three things that would happen by the year 2050 if global warming continues at its present rate. (3)

11. Economic activities can be divided into Primary, Secondary and Tertiary industries.

a. To which category of industry does tourism belong? Give a reason for your answer. (2)

b. Give three reasons for the rapid increase in the tourist industry in the last 50 years. (3)

c. Name four occupations related directly to the tourist industry. (4)

d. Mention three reasons why tourists visit Malta. (6)
e. Tourism has brought many benefits to the Maltese economy. List **three** of these benefits.  

(3)

d. Name **two** problems brought about by the increasing numbers of tourists visiting our islands especially in summer.  

(2)

12. Study the graph in Figure 5 below and then answer the questions set below.

![Figure 5: Climate graph of the Mediterranean Region](image)

a. Which is the wettest month?  

(1)

b. Which is the driest month?  

(1)

c. Calculate the total rainfall in winter (December, January, February) to the nearest 10mm.  

(2)

d. Which is the hottest month of the year? Give its temperature.  

(2)

e. Which is the coldest season of the year? Give its temperature.  

(2)
f. Name one place/region which has a Mediterranean type of climate in each of the following continents: Africa, North America and Australia. (3)

g. Drought is experienced by places with a Mediterranean climate. What is drought, and why does it create problems to farmers? (4)

h. Give two examples of trees typical of the Mediterranean woodland. (2)

i. Name three plants typical of scrub vegetation. (3)

13. a. Figure 6 below shows a section through soil. What do we call such a section? (1)

![Image of a section through soil]

Figure 6

b. Make a copy of Figure 6 above and then add the following labels in the correct place on your drawing.

- Underlying rock
- Soil depth
- Grass and dead leaves
- Humus (4)

c. Why is soil considered a renewable resource? (2)

d. What is humus and why is it important? (2)

e. Mention two types of soil found in the Maltese Islands. (2)

f. Briefly explain how soil is formed. (3)

g. List three ways how soil erosion can be reduced. (6)