Question 1
a) In the space provided below, draw a diagram to show the internal structure of the earth and label it with the following words:

```
inner core   outer core  mantle
crust       convection currents
```

b) Explain how the processes under the Earth’s crust cause earthquakes and volcanoes.

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

____________________________________________________________________________

(3)

c) Two volcanoes are marked with the letters E and V on the map of the Mediterranean region (Figure 1 on page 2). Name these two volcanoes in the table below.

<table>
<thead>
<tr>
<th>Volcano</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td></td>
</tr>
<tr>
<td>V</td>
<td></td>
</tr>
</tbody>
</table>

(2)
d) Two fold mountain ranges are marked with the letters A and P on the map of the Mediterranean region (Figure 1). Name these mountains in the table below.

<table>
<thead>
<tr>
<th>Mountains A</th>
<th>Mountains P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(2)

e) Figures 2 and 3 show and active and a dormant volcano.

Figure 2

(i) Which figure shows an active volcano? ___________________________ (1)

(ii) Which figure shows a dormant volcano? ___________________________ (1)
(iii) Why do you think so?

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________ (3)

f) With the help of Figure 4, explain two advantages that volcanoes have for people living in nearby villages.

Figure 4

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________ (4)

g) Write two problems that volcanoes may cause for people living in nearby villages.

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________ (4)

h) Figure 4 below shows the internal structure of a volcano. Label this figure with the following characteristics of a volcano:

vent  crater  magma chamber

![Figure 5](image-url)
i) Write true or false:

| Molten rock flowing down the slopes of a volcano is called magma. |  
| Lava is molten rock inside a volcano. |  

(2)

j) Write each of the following words next to its meaning:

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>seismograph</td>
<td>The instrument that measures the strength of an earthquake.</td>
</tr>
<tr>
<td>Richter</td>
<td>The strength of an earthquake is measured on this scale.</td>
</tr>
<tr>
<td>tsunami</td>
<td>The point on the Earth’s surface from where a seismic wave spreads out.</td>
</tr>
<tr>
<td>pyroclastic cloud</td>
<td>A huge waved caused by a submarine earthquake.</td>
</tr>
</tbody>
</table>

(5)

**Question 2**

a) In Malta we find examples of three different uses of water – domestic use, agricultural use and industrial use. Give an example of each of these uses.

   **Domestic use:** ____________________________________________________________

   **Agricultural use:** _______________________________________________________

   **Industrial use:** _________________________________________________________

   (6)

b) Figure 6 shows the rock layers of the Maltese Islands. On Figure 6, draw in blue the Upper Water Table.

   (1)

c) On Figure 6, draw in green the Lower Water Table.

   (1)
d) (i) Look carefully at figure 7, showing how rain forms. Place the following in the correct place on the diagram.

- Air cools
- Condensation occurs and clouds form
- Precipitation
- Warm air rises
(ii) Give the meaning of the following words:

**Evaporation:** ____________________________________________

____________________________________________________________________

**Condensation:** _________________________________________________

____________________________________________________________________

(e) Underline the correct answer:

Figure 8 shows (relief / frontal / convectional) rainfall.

(f) Explain how this type of rainfall is formed by writing in the table below what is happening at each stage marked 1 to 3 in Figure 8 above.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
g) Figure 8 below shows a Reverse Osmosis plant. Briefly explain how this plant produces water suitable for drinking.

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

(2)

Figure 8

h) Why is it better to obtain water from the aquifer than from reverse osmosis plants?

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

(2)

i) In Malta water is a scarce resource. Mention three ways how you can reduce water consumption at home.

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

(6)

j) Name two ways how underground water can become contaminated and unfit for drinking.

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

(2)
Question 3

Use the map of the world (Figure 9) to answer the following questions.

a) In the table below write the names of the lines of latitude marked with the letters A, B and C. Choose from:

<table>
<thead>
<tr>
<th>Antarctic Circle</th>
<th>Tropic of Cancer</th>
<th>Equator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latitude A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latitude B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latitude C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b) Two lines of longitude X and Y are marked on the map of the world. In the table below write the letter that shows the Prime Meridian.

<table>
<thead>
<tr>
<th>Prime Meridian</th>
</tr>
</thead>
</table>

(1)

c) In the table below write the name of the desert marked with the letter D on the map of the world. Choose from:

<table>
<thead>
<tr>
<th>Australian Desert</th>
<th>Atacama Desert</th>
<th>Sahara Desert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desert D</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1)

Figure 9: Map of the world
Question 4
a) Figure 10 and Figure 11 show two desert features – a rock pedestal and a sand dune. Write the name of each feature next to the correct picture.

Figure 10

Figure 11

b) Briefly explain how one of these features is formed.

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

(3)

c) The table below shows the mean monthly rainfall of a place in a hot desert. Continue plotting the following graph with the rainfall amounts shown in the given table.

<table>
<thead>
<tr>
<th>Month</th>
<th>J</th>
<th>F</th>
<th>M</th>
<th>A</th>
<th>M</th>
<th>J</th>
<th>J</th>
<th>A</th>
<th>S</th>
<th>O</th>
<th>N</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rain (mm)</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>8</td>
<td>25</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>
d) Write two sentences to describe the hot desert climate.

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________ (3)

e) With the help of Figure 12, write two characteristics that help the camel to live in the desert.

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________ (4)
f) Figure 13 on page 11 shows how an oasis is formed. Write a sentence to explain what is happening at each number marked 2 to 5 on Figure 13. The first one is given as an example.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rain falls on the mountains at the edge of the desert.</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Figure 13