Direction to Candidates

Answer any two questions from Section A and two other questions from Section B. Answers are to be written on the booklet provided.

Each question carries 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 questions from Section A.

1. Figure 1 below shows weather conditions over Europe and the Mediterranean Region on a particular day.

![Figure 1](image-url)
(a) The time of year this weather map was drawn up was early spring. How can you tell from the map?

(2)

(b) Several isobars across the map indicate different pressure systems. Describe in detail the pressure system that is dominant over the British Isles and also the type of weather one would expect there under such conditions.

(8)

(c) In contrast, very different weather conditions dominate the Central Mediterranean Region, including the Maltese Islands. Explain such weather conditions in detail.

(6)

(d) Most of the isobars over North West Europe are drawn with arrows, very close to each other. What does this show about the strength of the wind?

(4)

(e) What is the direction of the prevailing wind over the Maltese Islands?

(2)

(f) Three types of fronts of air are shown on the map. State which type of front was passing over the following regions:

   (i) Eastern Spain
   (ii) Southern Finland
   (iii) Eastern Europe, including Romania and Ukraine.

(3)

2. (a) Explain the processes that lead to the formation of cirques, arêtes and pyramidal peaks high up on the mountain slopes?

(8)

(b) Describe the main features of a glaciated valley now that they are visible since the glacier has melted.

(6)

(c) Lateral and medial moraines are shown in figure 2.

![Figure 2](image)
(i) Explain how these two types of moraines are formed.  
(3)

(ii) Name and explain two other types of moraines not labelled in Figure 2.  
(3)

(d) Analyse why glaciated areas attract a lot of visitors.  
(5)

3. (a) The lower stage of a river’s course is characterised by a number of features. Choose two of the following features and with the help of relevant sketches, explain how they form:

(i) ox-bow lake
(ii) distributaries
(iii) natural levée
(iv) arcuate delta

(8)

(b) Figure 3 shows a map of Bangladesh, a country very prone to flooding.

(i) Give three reasons why flooding is a frequent problem in Bangladesh.  
(3)

(ii) Explain in detail the harmful effects that flooding can have in such a poor country as Bangladesh.  
(8)

(iii) Explain three ways in which flooding can be prevented or controlled.  
(6)

Figure 3
4.  (a) Copy table 1 on the booklet showing the main differences between the various types of plate boundaries. Fill in the missing details.

Table 1

<table>
<thead>
<tr>
<th>Plate Boundary</th>
<th>Description</th>
<th>Main Hazard or main feature</th>
<th>Example</th>
<th>Can be linked to</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The oceanic plate moves towards a continental plate.</td>
<td>Pacific plate, Philippines plate &amp; Eurasian plate</td>
<td>Kobe Earthquake, Eruption of Mount Pinatubo</td>
<td></td>
</tr>
<tr>
<td>2. Conservative</td>
<td>Earthquakes</td>
<td></td>
<td>Californian Earthquake</td>
<td></td>
</tr>
<tr>
<td>3. Collision</td>
<td></td>
<td>Indo-Australian plate &amp; Eurasian Plate</td>
<td>Formation of the Himalayan Mountains</td>
<td></td>
</tr>
<tr>
<td>4. Constructive</td>
<td>Two plates move away from each other.</td>
<td>Eurasian &amp; North American Plate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) Examine the given diagrams A, B and C in Figure 4.

Figure 4
(i) Explain in detail how new land is created due to the plate movement in Figure 4A. (5)

(ii) Explain why part of the crust is lost due to the plate movement in Figure 4B including details about what eventually happens to the material that is lost. (6)

(iii) Explain what is happening in Figure 4C giving details about why such a plate boundary is not associated with volcanic activity. (6)

Section B
Answer two questions from Section B.

5. (a) Explain the term renewable energy. (2)

(b) Give two examples of renewable energy sources and two examples of non-renewable energy resources. (2)

(c) Give two advantages and two disadvantages of using each of the following types of energy:
   (i) Hydro-electricity
   (ii) Wind energy
   (iii) Nuclear energy (12)

(d) How is geothermal energy produced? Give two advantages and two disadvantages of geothermal energy. (9)

6 (a) List five advantages of tourism activity in Malta. (5)

(b) Figure 5 shows the distribution of departing tourists from Malta in 2006. Explain this distribution and list three reasons for such a seasonal pattern. (10)
(c) Describe five disadvantages of tourism and the seasonal patterns of tourist departures in Malta, as described in Figure 5.

(10)

7. Models of urban structures have been developed to explain patterns of land use and to characterise the development of particular cities. The figures below represent two such models.

(a) Name each of the zones marked by the numbers 1 to 5.

(5)

(b) Briefly explain each of these models.

(10)

(c) Explain the term rural-urban fringe. Explain the developments that are taking place in this area.

(8)

(d) What can be done to stop cities from spreading outwards into the countryside?

(2)

8. The Demographic Transition Model can be divided into four distinct stages.

(a) Identify and explain in detail the changes to the birth and death rates over time.

(8)

(b) Give three reasons for each of the changes from:

(i) stage 1 to stage 2
(ii) stage 2 to stage 3
(iii) stage 3 to stage 4

(9)

(c) Explain the term population explosion.

(2)

(d) Comment on China’s one-child policy as a measure combating population explosion.

(6)