LICENCIATURA EM GEOGRAFIA

Exame de Geomorfologia Litoral

ÉPOCA RECURSO ***5 fevereiro de 2025***

The exam is to be solved individually and without consultation.

1. The sea is rarely at rest. Even if there is no surface agitation, the tide involves movements in the water column.

1.1 Label the **wave parameters** shown in **figure 1** by the numbers **1 to 4.**
1.2 With regard to waves, **distinguish between significant height and maximum height**.
1.3 Why doesn't the **process of waves breaking** occur near the coast?
1.4 How are **waves generated** in the oceans?

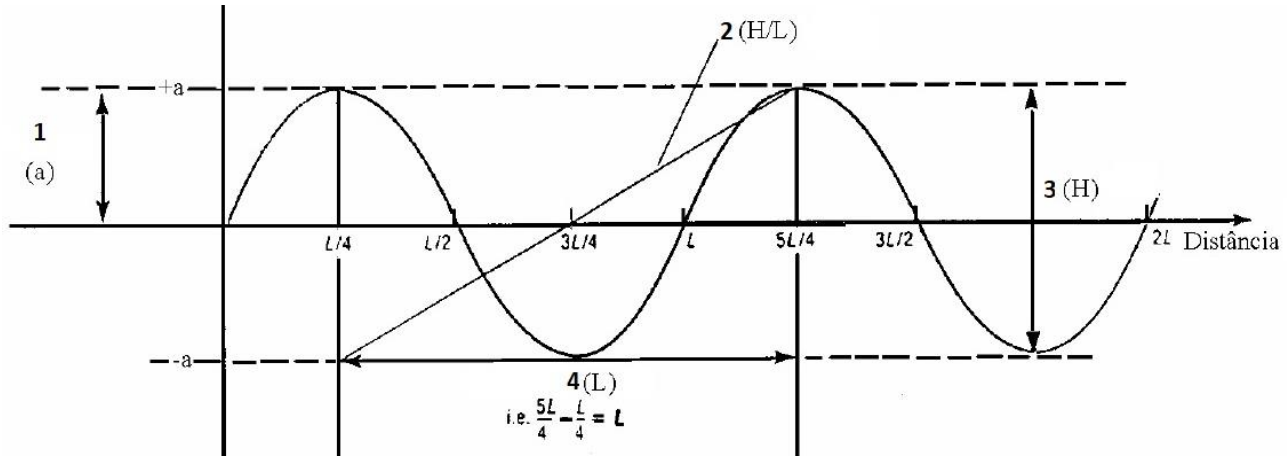

Figure 1 - The parameters of the wave.

1.5 Label the **tidal elements** shown in **figure 2** by the numbers **1 to 7**.
1.6 Identify the **tidal regime** of **tide gauges A and B** shown in f**igure 2**. Justify your answer and indicate which of these regimes occurs on the west coast of Portugal.
1.7 Briefly describe the **tidal formation process**.

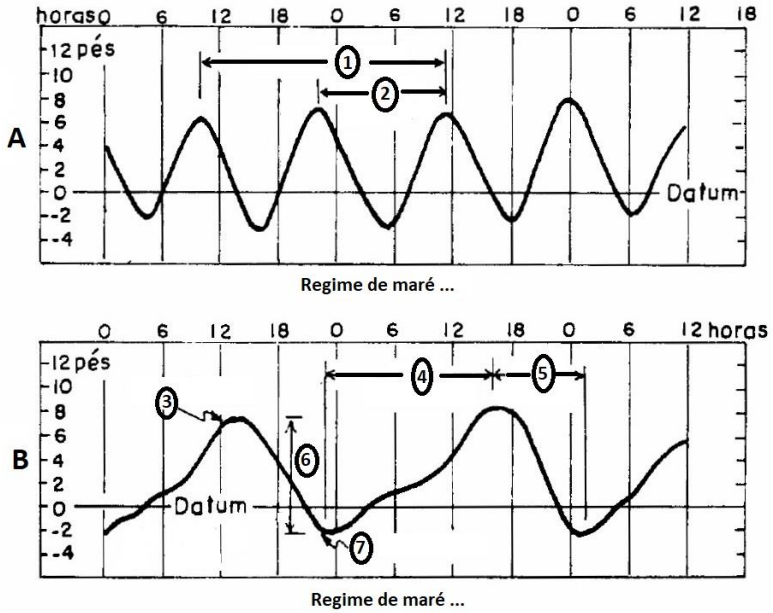

Figure 2 - The elements of the tide.

2. The rocky coasts display very characteristic landforms associated with erosive and depositional processes.

Identify erosive forms typical of rocky coastlines and characterize the erosive processes that contribute to their formation.

3. Assuming you're going on a field trip to the coast of Nazaré today, using the internet, prepare the following information in graph form:

- tide gauge for this week (see Hydrographic or others);
- significant and maximum swell height in the last 24 hours (Hidrográfico - Nazaré Oceânica or Puertos del Estado);
- wind felt today, average speed and gust (https://www.wunderground.com/dashboard/pws/IPATAI7).

3.1 - Analyse the graphs you have obtained.

Boa sorte.